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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;

NOW IN COURSE OF DELIVERY AT THE THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.

BY

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&c., &c.

DISEASES OF THE LIVER, PANCREAS, AND SPLEEN.—*Frequency of disease of the liver; it is greatly susceptible of changes in form and size. Nerves of the gall-ducts. Inflammation of the liver; its history, symptoms, and treatment. Venous and bilious congestion of the liver. Encephalosis. Tubercles. Hydatids. Fatty liver. Cirrhosis. Diseases of the biliary ducts; obstruction; calculi; rupture of the gall-bladder. Diseases of the pancreas. Diseases of the spleen; inflammation; organic disease.*

GENTLEMEN:—I proceed to call your attention to

THE DISEASES OF THE LIVER, PANCREAS, AND SPLEEN.

Few diseases require the attention of the physician more than those of the liver; the diseases of the spleen, and especially of the pancreas, are too obscure to possess equal interest.

The liver is the central organ of so many systems,—the hepatic artery, the vena portæ, the biliary ducts; the hepatic vein;—that its diseases, minutely considered, must be equally various and important. The profession possesses a treatise on this subject, of great value and novelty, by Mr. Kiernan, who has made many interesting discoveries in the minute anatomy and pathology of this organ.

The lungs subsist, as a part of the general circulation, between the right and left sides of the heart; M. Andral has arranged the spleen in a similar manner; the liver certainly deserves such a place much more pre-eminently; its function seems to be subsidiary to that of the lungs, as a depurator of the blood, and the whole of the blood accumulated in the vena portæ circulates through its substance.

The lungs serve also to purify the blood by the evolution of heat; the liver performs the same office without that evolution; the difference of combination of these two organs seems to lead to the constitution of the different classes of animals with warm or cold blood, and with low and high irritability.

But it is my object to place before you, as usual, a *practical* view of the diagnosis of hepatic diseases. The liver, like every other organ, is subject to inflammation. It is exposed to venous congestion from the interrupted return and flow of blood in diseases of the heart, and it is subject to bilious congestion from obstructed gall-ducts. This organ is also liable to other diseases, which are common to it with several other viscera, as encephalosis, scirrhus, tubercles, hydatids; and it is exposed to others, peculiar to itself, viz. those termed the *fatty liver* and the *cirrhosis*.

M. Andral correctly observes,—"There is scarcely any affection of the liver which has not been designated hepatitis. In my opinion there is scarcely any which has not arisen from an injury which has first induced a state of hyperæmia. For example, four persons are exposed to a blow over the liver; one has an abscess, a second cancer, a third hydatids, a fourth hypertrophy." M. Cruveilhier makes a similar observation.

No organ is so susceptible of changes of size and form. Under the influence of the compression from ascites, the liver sometimes shrinks greatly; and it is sometimes marked by the tight lacing of stays. In case of enlargement it may encroach upon the thorax, the left hypochondriac, or the right iliac region.

To the preceding list must be added obstruction of the gall-ducts, and it is complete for all practical purposes.

In reference to the *gall-ducts* I must make a remark or two. They receive filaments from the pneumogastric nerve; they are, like

the *orifices* in general, and with the commencement of the urethra, parts of the excito-motory system. A gall-stone, a small calculus, impacted in their respective canals, induce violent vomiting, acting upon an incident excitor nerve; in a word, this peculiar system meets us everywhere. There are few diseases in which it does not participate, and there are many diseases of which it is the peculiar seat.

The diseases of the spleen and pancreas require but a cursory notice. The former organ is apt to be enlarged in intermittent fever. The diseases of the pancreas are very obscure.

I.—DISEASES OF THE LIVER.

I. Inflammation.
- 1. *Injection.*
- 2. *Softening.*
- 3. *Induration.*
- 4. *Enlargement.*
- 5. *Abscess.*
  - A. *Solitary. This may open*
    - 1. *Externally.*
    - 2. *Into the Gall-bladder, or Ducts.*
    - 3. *Into the Stomach, or Intestines.*
    - 4. *Into the Bronchia.*
    - 5. *Into the Abdomen.*
    - 6. *Into the Pleura.*
    - 7. *Into the Pericardium.*
  - B. *Numerous.*

II. Congestion.
- I. *Venous.*
  - 1. *Causes.*
  - 2. *Effects.*
- II. *Bilious.*
  - 1. *Causes.*
  - 2. *Effects.*

III. Encephalosis.
- 1. *Solitary.*
- 2. *Diffused.*

IV. Scirrhus.
- 1. *Solitary.*
- 2. *Diffused.*

V. Tubercles.

VI. Hydatids. They may escape—
- 1. *Through the Abdominal Parietes.*
- 2. *Through the Stomach, or Intestine.*
- 3. *Through the Bronchia.*
- 4. *Into the Peritoneum.*
- 5. *Into the Pleura.*

VII. Fatty Liver.

VIII. Cirrhosis.

II.—DISEASES OF THE BILIARY DUCTS.

Obstruction.
- 1. *By Inflammation.*
- 2. *By Calculi.*
- 3. *By External Pressure.*

III.—DISEASES OF THE PANCREAS.

IV.—DISEASES OF THE SPLEEN.

I.—DISEASES OF THE LIVER.

I.—INFLAMMATION.

I. *The History.*—Inflammation of the liver may arise from ordinary causes, as exposure to wet and cold; from blows or falls; and from constitutional causes, as disease of some other organs.

II. *The Symptoms* consist in local pain, augmented by pressure, and by percussion; sometimes the border of the organ is to be felt; sometimes there is jaundice, ascites, or anasarca. There may be little febrile action; pain of the right shoulder does not belong to hepatitis; but the condition of the stomach and bowels is generally deranged, and there are anorexia, nausea, sickness, constipation, and a colourless state of the fæces, and the urine is frequently high-coloured.

III. There is considerable tolerance of loss of blood, and this becomes a useful diagnostic.

IV. *The Morbid Anatomy* consists of
1. Injection.
2. Softening.
3. Induration.
4. Enlargement.

But, besides these states, there is a fifth, which requires particular notice. This is
5. Abscess.

1.—*Solitary Abscess.*

The Symptoms of this termination of hepatitis occasionally resemble intermittent fever; but in other cases they are very obscure, and the occurrence of suppuration is not suspected until the abscess points, or the pus appears externally. The pus may issue by an opening—
1. In the Hepatic Region.
2. Into the Gall-Ducts.
3. Into the Stomach or Intestines.
4. Into the Bronchia.

This appearance of pus is known to arise from hepatic abscess, by being associated with the previous history and symptoms. The abscess sometimes bursts into—
1. The Peritoneum,
2. The Pleura, and
3. The Pericardium;

an event which can only be conjectured from the occurrence of some sensation, as of rupture, and by the appearance of symptoms of inflammation of one or other of these several membranes.

2.—*Numerous Abscess.*

This form of hepatic disease occurs, like similar abscess in other parts, in cases of phlebitis.

The Treatment of inflammation of the liver consists in the administration of blood-letting, general and local, of mercury, internally and externally, of saline aperients, most actively and energetically, in the acute form, and more mildly but perseveringly, in the more chronic form of the disease.

In its chronic stage, the alcoholic lotion,

or a seton, is of great advantage. With these remedies a course of the Harrogate, or of the Cheltenham water, or a similar remedy at home, must be conjoined.

The full warm-water enema, given night and morning, or every morning, is a remedy of great efficacy in all diseases of the liver.

II.—CONGESTION

1.—*Venous.*

Venous congestion of the liver usually arises from disease of the heart impeding the flow of blood from the hepatic vein. It leads to enlargement of the liver, to dropsy, and perhaps to icterus.

The most vivid light has been thrown upon the forms assumed by congestion of the liver by the labours of Mr. Kiernan. That congestion usually existing in the hepatic vein, and this in the centre of each lobule or acinus, its first stage is denoted by circular spots of redness round that centre, and its second stage by these variously coalescing together, appearances which are shown very beautifully in Mr. Kiernan's drawings.

The appearances produced by congestion of the portal vein may be produced artificially by injecting this vein forcibly in the dead subject.

2.—*Bilious*

Bilious congestion of the liver arises from obstructed gall-ducts, and leads to enlargement of the liver, to dropsy, and emaciation, and is attended by icterus.

II—ENCEPHALOSIS.

I. *The History.* This disease is extremly insidious, and ultimately induces symptoms only by its size and pressure.

II. These *Symptoms* are uneasiness and oppression in the epigastric and hypochondriac regions, augmented by food, relieved by purgatives. The countenance is pallid and thin, and there is general and progressive emaciation, with ascites and anasarca, and very frequently with icterus. The enlargement of the liver, and, at length, even its irregularities of surface, are felt on a careful examination.

The Symptoms are sometimes merely those of hypochondriasis. A careful examination should be made in every such case.

III. *The Morbid Anatomy* consists in the presence of encephaloid tubera, which may be few in number, and confined to the liver, or, what is more frequent, diffused over this and various other organs. These tumours compress, in different instances, a large blood-vessel, a large gall-duct, the vena portæ; inducing respectively,—

1. Partial Atrophy.
2. Icterus.
3. Ascites; Anasarca.

The ascites is probably occasioned, in some instances, by irritation of the portions of the peritoneum adjacent to the hepatic tumour or tumours; and effusion into the thorax has arisen in the same manner. Other diseases, as of the heart and of the lungs, are also occasionally induced by hepatic encephalosis, besides the occurrence of the same morbid change in various organs. In fact, few diseases, as I have observed already, are single or simple.

IV.—SCIRRHUS.

The Symptoms of scirrhus of the liver are similar to those of encephalosis of this organ. The countenance is rather sallow than pallid, and there is earlier emaciation. The hepatic tumours are usually smaller than those of encephalosis.

V.—TUBERCLES.

Tubercles of the liver are characterised by no symptoms except those of tubercles, and of disease of the liver in general.

VI.—HYDATIDS, OR ACEPHALOCYSTS.

This affection may be suspected when there is enlargement of the liver, unequally developed, perhaps circumscribed, and then perhaps fluctuating; icterus, ascites, anasarca, may be superadded.

Hydatids of the liver may be expelled through—

1. The Intestinal Canal.
2. The Bronchia;

or they may escape into

1. The Peritoneum,
2. The Pleura;

and then there is sudden acute inflammation.

The Morbid Anatomy consists of the various distortions and enlargement of the liver by cysts and hydatids.

VII.—THE FATTY LIVER.

In this case the liver is enlarged, leaves a layer of oily substance on the scalpel, renders paper oily and transparent when warmed, and burns in the flame of a candle when its aqueous particles are evaporated; it sometimes swims upon water. It is unattended by icterus. It occurs principally in *Phthisis.*

VIII.—CIRRHOSIS.

This disease consists of diminution and deformity of the liver, which is dense, granular, wrinkled, and, as its name imports, of a yellow colour. It is uniformly attended by ascites, but without icterus.

II.—DISEASES OF THE BILIARY DUCTS.

The only disease of the biliary ducts which can be detected during life is

OBSTRUCTION;

and this may arise from a great variety of causes, as

1. Thickening of the Ducts themselves.
2. Calculi; or Viscid Bile.
3. The Compression of Hepatic Tumours.
4. The Compression of a Tumour of some adjacent Organs.
5. Inflammation of the Duodenum.
6. A loaded state of the Colon.

The Symptom common to *all* these cases is icterus; those peculiar to *each* have been already detailed, with the exception of

BILIARY CALCULI.

1. *The History and Symptoms.*—Biliary calculi induce no symptoms, except when they obstruct the hepatic or the cystic ducts; they may long exist in the gall-bladder or cystic duct without symptoms. In the former case they may induce *sudden paroxysms*, or confirmed suffering, of the kind about to be described.

The paroxysm consists of the most excruciating pain, and perpetual sickness and vomitings; these are frequently *preceded* by *rigor* and *followed* by *icterus;* the bowels are constipated, the fæces pale, and the urine scanty and deep-coloured.

II. *The Treatment* consists in a free state of the bowels, kept up by the oleum ricini and warm-water enemata; opiates for the pain; local bleeding for inflammation, &c.

The *continued pain* is attended by tenderness, extending from the region of the gall-bladder over the hepatic region, and by icterus; and eventually the liver itself becomes affected with inflammation, bilious congestion, and enlargement.

There is a fact, a reference to which is essential to the completion of the diagnosis of diseases of the liver and its appendages; it is that of

Rupture of the Gall-Bladder.

Such cases are mentioned by many authors, and recently by M. Cruveilhier and M. Andral, and such a case lately occurred in the practice of my friend Mr. Cox.

The Symptoms are those of the most sudden and acute peritonitis: excruciating pain and tenderness; sickness; sinking, &c., and, in a word, the symptoms observed in perforation of the stomach or intestine.

III.—DISEASES OF THE PANCREAS.

The pancreas is sometimes found of a redder colour, and denser texture, than natural, or affected by suppuration. It may be scirrhous, or compressed by scirrhus; but the symptoms are unknown, and, to this day, the diseases of the pancreas are of as little moment in a therapeutical point of view, as they are rare in their occurrence.

IV.—DISEASES OF THE SPLEEN.

The diseases of the spleen are exceedingly obscure: they may be viewed as only forming a part of a previous disease, as

1. Typhus.
2. Intermittent.
3. Purpura, &c.

or as constituting a primary disease, as

I. Inflammation, inducing
   1. *Changes in volume, consistency, colour;*
   2. *Suppuration.*
      1. *Diffused.*
      2. *Abscess.*

II. Organic Disease.
1. *Tubercles.*
2. *Encephalosis.*
3. *Cysts.*
4. *Hydatids, &c.*

I.—INFLAMMATION.

Inflammation of the spleen is usually attended by obscure pain and scarcely any symptoms. It has been supposed to give origin to phenomena of an *aguish* or *intermittent* character. It is principally to be detected by a careful *examination:* there is sometimes tenderness, sometimes a perceptible tumour; sometimes without tumour, the sound of the posterior and lowest part of the left side of the chest is dull, though the respiration is perfect. The treatment is that of topical inflammation.

II.—ORGANIC DISEASE.

Organic disease of the spleen is easily detected when there is enlargement, by which alone, indeed, it seems to affect the general system.

I have thus given you a practical sketch of diseases of the liver, pancreas, and spleen. The great point is the *diagnosis*, and the diagnosis depends upon a careful and skilful *examination*. Your patient should be laid recumbent on his back; the head and knees should be gently raised, and he should be taught to relax the abdominal muscles. The fingers are then to be pressed gently in every part to detect *tenderness*, or *induration*, or if the liver be felt, *both* combined.

I mention this last circumstance because the liver is frequently felt in the hypochondrium, from being pressed down by effusion into the thorax; but there is then no tenderness.

In some diseases, as in encephalosis, we not only examine for tenderness and tumour, but also for unevenness of surface.

Having detected tenderness, and especially enlargement of the liver, we proceed to trace them to their cause, which may be chronic inflammation, or congestion, from obstructed circulation through the heart, as I have already stated repeatedly; or they may depend upon the fatty condition observed in phthisis, and some other allied affections.

We must especially inquire into the *habits* of the patient. Has he resided in a tropical climate? Has he been addicted to spirituous liquors?

I here terminate my observations on the liver and spleen. They have been brief, because I wished to restrict myself to what is practical. The subject of my next lecture on Diseases of the Urinary Organs, will require your most strict attention. I shall enter into it minutely, and shall endeavour to make it practically useful.

ABSTRACT OF

A CLINICAL LECTURE

By MR. LISTON,

ON THE

DIVISION OF THE TENDO ACHILLIS AND OTHER TENDONS.

(Delivered at the University College Hospital.)

Division of the Sterno-mastoid, for Torticollis; of the Tendo Achillis for Club-foot; of Flexor Tendons for Contracted Knee-joint; of the Tendons of the Toes, for inflamed Corns, &c.

In the commencement of his lecture Mr. Liston said the division of tendons for the cure of deformity, was by no means a new proceeding; it was frequently resorted to by many of the older surgeons, among whom were John Mekran, and Mr. Sharpe, a surgeon of Guy's Hospital, nearly a century since, which latter was in the habit of dividing the origin or attachments of the sterno-mastoid muscle, for the cure of torticollis. This operation had been repeated of late years by Sir B. Brodie, by the late Baron Dupuytren, and he, Mr. Liston, had seen cases in which its performance was attended by good results. It was a proceeding, however, which was not frequently called for, inasmuch as the twisted state of the neck was generally produced by disease of the vertebræ, or from a painful swelling or ulcer on the side of the neck, producing such an alteration in the structure of the part, as to render operative proceedings useless. Delpech might justly be considered as the founder of the operation of dividing the tendo Achillis for the cure of club-foot. He had related in his "Chirurgie Clinique" several cases of varus, as they were called, and described the plans of his apparatus for carrying out his mode of curing them. One or more cases were related in which the tendon was divided. His plan was to make a longitudinal incision on each side of the tendon, through which he slipped his knife, and divided the tendon from before backwards. Within the last year or two a great number of cases in which the tendo Achillis had been divided, had occurred, and were related by the operators, Stromeyer, Dieffenbach, Guerin, and Dr. Little, who himself was the subject of varus, and had published a thesis on the deformity. This gentleman had also latterly published a number of cases in which the tendo Achillis was divided for the cure of deformity, to which he had given odd and long-sounding names, such as talipes equinus verus, &c. &c. The deformity of the foot presented itself in a variety of forms. When the under part of the foot was turned inwards, the deformity was termed varus. In other cases the foot was turned outwards. The first, however, was the most common deformity, and in this case the toes were turned inwards, the patient rested on the cuboid bone, and the root of the metatarsal bone of the little toe. The bones of the foot in this kind of deformity were little altered in form or appearance. They had attained their ordinary size, and were little distorted regarding their position one with another. After a time, however, if the deformity was not remedied, the bones on the inner size of the foot diminished in size by interstitial absorption; the internal cuneiform, the os calcis, and the soft parts covering them became altered. The patient rested on this part, the integuments of which became thickened, and a bursa formed in this situation. The limb on the affected side, to the knee-joint at least, lost its size and strength, the muscles becoming soft and flabby, and losing their red appearance. In many cases which were met with the heel was much elevated, owing to the natural shortness of the gastrocnemius and and soleus, and their combined tendon; other tendons were also necessarily shortened, while, on the other hand, some tendons, as those of the peronei, were of course elongated. Sometimes, in the deformity called "horse-foot," the patient rested on the distal extremities of the metatarsal bones; this deformity was congenital, sometimes affecting both, sometimes one of the feet. A variety of apparatus had been invented for the purpose of curing these deformities, almost every instrument-maker having a plan of his own. The celebrated Scarpa had recommended one kind of instrument, Delpech another, and Mr. Colles, of Dublin, another. Sometimes the use of an iron, which passed up on each side of the leg, if continued for years, might affect a cure, but there was always much opposition from the contracted state of the tendons, particularly of the tendo Achillis, the division of which much accelerated the cure, leaving the instrument-maker much less to do, or at all events diminishing his difficulties. When the tendo Achillis was divided by accident, it united after a time in a favourable manner, a substance being deposited between the ends of the divided tendon; this substance became dense and fibrous, and could not be distinguished from the tendon itself. Horses were subject to an acquired deformity, in which they walked on the point of the hoof of one of their feet. Most of the pupils had seen horses going about with this deformity. Veterinarians had long been in the habit of cutting across the flexor tendons for the relief of this state; they were not at all particular as to the mode in which they performed the operation; they just drew the knife across the leg, and brought the foot into its proper position; the tendons soon united, even though, in some cases, there was a space of three or four inches between the ends of the

divided portions, new matter, resembling the original tissue, soon filled up this space, and the cure was completed. It was from reasoning on these facts that Delpech was induced in 1816, to resort to the proceeding of dividing the tendo Achillis, but he cut through the integuments awkwardly. (Mr. Liston here exhibited several casts, also specimens of the deformity, at various ages, dissected, and a horse's tendon, which had been cut and united.) There, said he, was a specimen of varus; and there two cases in which the foot was permanently extended, the patient, in one case, having walked on his toes with one foot; in the other, both feet were affected from birth. In all these cases the foot was brought into the natural position by division of the tendo Achillis, which proceeding materially assisted the apparatus maker. He alluded shortly to a case of acquired extension of both feet which had occurred some years ago during a severe attack of rheumatic gout, or rather of gonorrhœal rheumatism. The heels could not be brought within several inches of the ground; the patient had been to watering places, and had been most judiciously and anxiously treated, but without relief. The tendons, in a most rigid state, were divided with great benefit. The operation was easily performed; there was no necessity of dividing the integuments; a small punctured wound with a very narrow bistoury, or what was better, with a needle somewhat resembling a cataract needle, being sufficient. He had divided many with that needle (showing it) with scarcely a perceptible external wound; the tendon was first to be felt for, and being found, the instrument was to be passed close to it, between it and the bone; there were no blood-vessels or nerves likely to be wounded; the point of the instrument was then to be turned towards the tendon, which was to be tickled through and divided gradually; the division was indicated by an audible snap. There was a slight effusion of blood internally about the ends of the divided tendon, but there was no mark or external injury, no swelling, inflammation, or its consequences. The extremities of the tendon soon poured out plastic matter, and this uniting medium, at the expiration of about ten days, might be extended by means of the apparatus employed for this purpose, and in six or eight weeks the foot would be brought into its natural position. In this case (showing a cast), the patient's foot was not only extended but turned inwards. A cure was effected by a rod which passed up the inner side of the foot. In this case (showing another cast) the patient had distortion of the spine accompanying the deformity of the foot. In two months after the division of the tendon he was able to walk about, the foot being of the natural shape, and altogether of a better form; there was only a little bulging to be perceived in the situation of the divided tendon. There (showing the bones of a foot) was a case in which all the bones were altered in form; the os calcis was smaller than usual. This patient walked all his life on the outside of the foot; a large bursa had formed underneath the thickened cuticle.

The division of tendons answered the purpose of curing deformities in other situations. A case had been in the hospital in which the knee-joint was contracted. The tendons of the semi-membranosus and semi-tendinosus were divided. The contraction, in this case resulted from an attack of rheumatism some time since. After the tendons were divided, a screw-joint apparatus was applied similar to that used in fractures of the bones of the leg, by which means the leg could be gradually extended from day to day, by turning the screw. The knee-joint of this patient originally formed a right angle, but she was now enabled to put her toes to the ground, though she was still obliged to use crutches. He, Mr. Liston, would get the knee extended an inch or two more, if possible, not quite straight, however, as the patient would not walk so well as though it were slightly bent. He hoped, by dividing the tendon of the biceps to produce this extension.

He, Mr. L., had also latterly divided the tendons of the toes,—an operation, he believed, entirely new,—for a common deformity. We often found the toes bent permanently; the middle toe, generally, sometimes the little toe, which stood up above the others. This deformity was either congenital, or arose from the use of tight shoes. The integument on the convexity of the joint became thickened, and a corn formed. The pain in these cases was sometimes so severe that the patient begged that amputation might be performed. A corn, as the students were aware, not only consisted in a thickened state of cuticle, but there was often a small adventitious bursa underneath it; this bursa sometimes inflames and suppurates; here was a specimen in which this was seen (showing a preparation), and in this case the toe was amputated. In this specimen the papillæ of the cutis were also much enlarged; this occurred from the greater demand for the secretion of cuticle, as was also observed in the paw of the dog. Some chiropodists, as his friend, Mr. Durlacher, were very dexterous in cutting out a corn, and with scarcely any pain, by which means a cure was affected; but in cases in which the toe was, from its awkward position, constantly subjected to pressure, the suffering was much increased, and interference with the corn was of little use. It was in such cases that patients applied for the performance of amputation. He, Mr. L., had some time ago, been requested by a gentleman to amputate both his little toes,

which had become affected in the way described. In this case he did not wish to remove the toes, but the suffering was so great that the patient insisted on its being carried into effect. At length it was agreed that one toe should be removed, on condition that the other toe should be treated as he, Mr. L., wished, by the division of the extensor tendon. This proceeding was accordingly adopted. The toe, the tendon of which was divided, was brought into its proper position, and the foot soon became healthy and well. The patient was laid up with the foot from which the toe had been removed, for five or six weeks, an abscess having formed on the dorsum; and he did not go sound for long after with this foot, while with the other he need not have been confined a single day. He (Mr. L.) had operated on cases of a similar nature successfully, and had others under his care, in which he meant to pursue the practice. It did not deserve the name of an operation being unattended with pain, or the loss of more than one drop of blood.

FEVER AMONGST THE BRITISH LEGION IN SPAIN.

To the Editor of THE LANCET.

SIR:—In the month of July, 1837, you did me the favour to publish a brief account I sent to THE LANCET of the fever which prevailed in Vittoria, in the winter 1835-6. I mentioned then that I believed the poison or malaria which created that disease was of the sedative class. The experience I have since had further convinces me of the truth of it. I trust that seven years' absence from England, and every other portion of the civilised globe where the daily or almost hourly progress made in the treatment of diseases is made public through the medium of the press, will be a sufficient excuse for any erroneous or heterodox opinions I may have formed.

In the month of December a fever made its appearance in the artillery corps, a kind of typhus mitior, in the convalescence of which the patients were deeply jaundiced, or their whole skin tinged with yellow. This colour appeared first in the conjunctiva, and afterwards spread itself over the whole body. The first person attacked was the hospital sergeant, a man of very spare habits, rather thin, and weakly. The two first stages passed by in eleven days time. In the last stage he was supported with wine and light nourishing diet, and did well. I believe the severity of typhus fever is in the ratio of the physical powers or vital energy of the persons affected. For example, what would create violent effects on an English highly oxygenated system, would affect in a very mild manner the system of a Spaniard, who lives upon beans, vegetables, and chocolate. Women and children, for the same reasons, seldom fall victims to it.

The English Legion was, during the prevalence of the fever, stationed in the different numerous villages which surround Vittoria, and was suddenly ordered into that town. A couple of women belonging to some of the regiments were unable to come in with facility, being confined to bed with fever, and in the hurry were left behind. In the meantime the Carlists occupied the villages, and nothing was heard of, and perhaps as little thought about, the poor women, as they were, as their Irish medical attendant expressed it, "*all as one as dead.*" In about six weeks afterwards a move was made in that direction, and the women were recognised in the village, and joined their regiments in good health, and expressed great gratitude to the Spaniards for their kind attention to them. We all had reasons to be grateful to the Spaniards in whose houses we were quartered, for the kindness and attention they exhibited towards us whilst we were labouring under the effects of wounds or other infirmities. A further proof of the proposition laid down above is the fact that when the typhus prevailed in Vittoria, among the English, an epidemic also existed in the Spanish Army, but of a very mild form: a low fever and intermittent fever were very prevalent.

There were not patients to any amount sent from the Auxiliary Brigade, until the latter end of last February, to hospital, labouring under this malady, at which period an average of five or six a week were attacked. It is a mild form of yellow fever or typhus icterodes. It commences exactly as the typhus does, with languor, dejection of spirits, depression, general uneasiness, and soreness, loss of appetite. The patient and the doctor are apt to judge it a heavy cold. In the middle stage irritability of stomach, and continual vomiting of a dark green matter exist; the skin tinged and the head affected, in fact the whole system in a state of excitement. In the last stage general debility exists, a deadly sinking, the patient complaining of excessive weakness; at the same time the pulse is as large and full almost as a stair-rod; the exertions of the vascular system shake the whole body. The apparent fulness of the pulse at this period arises from the diminished tone and resistance in the coats of the arteries which allow them to expand more by a slight impulse of the blood from the heart than they would do under other circumstances. At this period the head is *never* affected. Sometimes the body is covered with a cold sweat, and the patient expresses his fears of never recovering, and complains of excessive weakness. Inexperienced practitioners with this pulse, are sometimes induced to use the lan-

cet, and other depleting means, to the great prejudice of their patients. I recollect being called in to see a child, nine years old, in company with two Spanish medical men at Santander, and being persuaded by them that serious inflammatory action was going on, when quite the opposite really existed, and the consultation ended in prescribing antimonial powders and saline purgatives. The child as might be expected, died. Had the patient been ordered port wine she would no doubt have recovered. The constitution at this period is making an effort to rally itself. It should be supported, and means used of allaying the irritability, without weakening its powers. Opium or Dover's powder would not be injurious if no head symptoms existed.

Colonel Da La Saussaye, commanding the British Auxiliary Brigade, became alarmed at the progress this fever was making in the artillery corps; he accordingly reported the matter to General O'Donnel, who ordered a medical investigation to take place respecting it. The persons appointed to make this inquiry were Jose Ferrer Garcia, the Physician-in-Chief of O'Donnel's division; Leon Anel, Surgeon of the 3rd Ligero Regiment; Domingo Garcia, Surgeon of the 2nd Ligero Regiment, and myself. In their report to General O'Donnel, they endeavour to enter into a detail of the cause or causes of the malady, and denominate it a gastro-hepatic disease, with cerebral affection, or irritation of the stomach, liver, and brain. Their description of it answers very well for a definition of yellow fever, or typhus icterodes. The Spanish troops stationed in Hernani, where the artillery are, were also attacked with it, but not with the same severity as the English. The average loss in the Spanish Hospital was one in nineteen. In the English Brigade Hospital, one in thirty. The British Artillery also lost a man from the same fever. If the commencement of convalescence be considered the crisis, the average number of days for the beginning of recovery, out of thirty cases I have had in hospital, was seven. The following is the fatal case above alluded to.

Lot Hayward, of the artillery corps, British Auxiliary Brigade, was admitted to hospital on the 22nd of May, 1838. A tall, able, plethoric man, 32 years of age, of a good constitution, complained of great depression and languor, and extreme pain and tightness across the chest, and inflamed throat; could only speak in a whisper, his breathing was so laboured and difficult; his large thorax was seen to rise and fall with every inspiration in a remarkable manner; his pulse was small, incompressible, and quick; tongue clean; no pain in the head or in the loins or legs; no thirst. Supposing inflammation to exist, and considering immediate relief necessary, I bled him to 12 ounces. He expressed himself relieved. He was purged in the morning by medicine before he was sent to hospital.

Blue pill, gr. v.;
Extract of colocynth, gr. v.;
Extract of hyoscyamus, gr. iij. To be made into two pills; one to be taken immediately, and the other at night.

22, evening. Difficulty of breathing greatly relieved; pulse softer and more moderate. Blister to chest and another to throat.

23, morning. Pulse small, quick, and incompressible; blood of yesterday cupped and sizey, but not buffed.

Antimon. powder, gr. iij.;
Blue pill, gr. v.; to be taken immediately. Lemonade.

23, evening. Had violent pains in testicles, described by Dr. Chisholme in yellow fever. Warm fomentations, which gave immediate relief; *Dover's powder*, gr. x.

24, morning. Sinking fast, unable to speak, even in a whisper; pulse not to be felt. One ounce of sherry wine, and half an ounce every hour.

24, evening. Ordered the wine to be continued.

25, morning. Voided from the mouth a large red worm, nine inches and a half in length. *Castor oil*, ℥j.

25, evening. Stomach rejected the castor oil. Complained of wine giving heart-burn; substituted brandy for it.

Blue pill, gr. v.;
Extract of colocynth, gr. v.

26, morning. Was informed by the orderly medical officer that the patient fainted in the night; he administered camphor with brandy and water and used frictions. The camphorated drink after the first dose or so nauseated, and was discontinued. Applied mustard sinapisms to the calves of the legs, and soles of the feet, and continued the brandy and water. Effervescing draught.

26, evening. Voided another large red worm. *Blue pill*, gr. v.

27, morning. *Blue pill*, gr. v., night and morning; effervescing draught.

28, morning. The commencement of the second stage,—eyes tinged with yellow, face yellow, and body slightly so; vomiting; head affected; pulse fuller and slower. Cold applications to head; half an ounce of brandy diluted with water, every two hours; effervescing draught.

29, morning. Quiet during the night, heavy and sleepy; pulse slower and fuller; teeth encrusted with a black hard substance; tongue dry, black, and chapped; must be aroused to extract an answer to a question. Brandy to be continued. *Blue pill*, gr. v., night and morning; effervescing draught.

29, evening. The very extreme of coma; twitching of tendons; pulse slower. Blister to nape of neck.

30, morning. Coma so much so as not to have the capability of drinking; took nothing during the night. Blisters had no

effect on head symptoms; pulse slow and comparatively full; by a great deal to do aroused him, and made him drink half an ounce of brandy, with three ounces of water. After the exertion he fell into his lethargic state. An aperient injection and the brandy to be continued every fourth hour.

30, evening. So violent when roused, found it impossible to administer enema; refused the brandy and water, shut his mouth against it; pulse slow, full, and compressible; sinapisms removed.

31, morning. Died last night at twelve.

At the period of the man's admission catarrhal affections were very prevalent, owing to the vicissitudes of temperature and weather generally. A few days before I lost a patient from inflammation of his lungs. The tightness across the chest, sore throat, and pain in the testicles, are considered very bad symptoms by all those who have written on the subject. I have seen in many instances of fever those large red worms voided both by mouth and by stool. It is not an uncommon occurrence in cholera; it occurs generally in very bad cases. The second stage of the fever above described in its symptoms is exactly like those of poisoning by opium.

There is scarcely a doubt of the mercurial treatment being the best, both in this disease and cholera. In both diseases there is a want of vitality, and mercury is a permanent stimulant. If a patient could in the first stage of the disease be salivated, it would, in my opinion, be the means of saving him, or hastening his recovery. I do not agree with Dr. Clarke, that undergoing a course of mercury would be a means of preventing the disease; on the contrary, I should think its enervating effects would render a patient more susceptible to it. I have known some practitioners so deeply impressed with the conviction of the beneficial results derivable from the administration of mercury, that they have given large and frequent doses of calomel, in order to affect the patient as soon as possible, such as a scruple of calomel on the entrance of a patient to the hospital, and ten grains every hour afterwards, for a length of time. The evil effects of this treatment is not discovered until the recovery of the patient, when the mercury which has slumbered in the system acts with its full force. Like the horse of Munchausen which, when hung over the chimney, commenced playing an air he had played some six months before in it, but the notes being frozen in their passage, were not heard until the fire had thawed them into existence. There is such a want of vitality in cholera and typhus fever, that the mercury has little chance of acting on the system. A patient is observed to recover the moment he is salivated. Query, is the salivation the cause of the recovery, or the recovery the cause of allowing the mercury to affect the system? The following case would almost lead us to suppose the mercury effected the recovery.

John Blay, of the Artillery corps, B. A. Brigade, aged 22 years, a healthy fine young man, rather delicate than plethoric, fair complexion, and fair hair, was admitted to the hospital on the 22nd of May, 1838; complained of pain in his head, in his loins, and in the calves of his legs, his face much flushed, and his left parotid gland swollen, and throbbing pulse, bounding, quick, and incompressible; tongue clean, and a bright red colour. Was purged with calomel before he was sent to the hospital.

Blue pill, gr. v.;
Antimon. powder, gr. iij.;
Extract of hyoscyamus, gr. iij. To be made into two pills, one to be taken immediately, the other at night.

22, evening. No change; ordered nothing.

23, morning. Pulse a little softer and slower; bowels relieved. Repeat pills.

24, morning. Pulse improved; face still flushed; eyes red; passed from mouth a large red worm. *Castor-oil*, ℥ss.

25, morning. Bled at the nose during the night, and again in the morning. Applied a dozen leeches to each temple; removed the hair, and put cold affusions to head.

25, evening. Not improved; head symptoms aggravated; speaking incoherently, and furiously insisting on dressing and getting up; blister to the nape of neck. *Blue pill*, gr. v.

26, morning. Partial coma, or excessive sleep. *Blue pill*, gr. v.; effervescing draught.

26, evening. Repeat the pill and draught.

27, morning. Still sleeping, but no raving; pulse fuller and slower; repeat pill and draught.

28, morning. No change; pill and draught as before.

29, morning. Passed a quiet night; face less flushed; pulse slower and fuller; more natural; mouth affected with mercury; conjunctiva a yellow colour; tongue dry; expectorates freely, as if recovering from a cold.

29, evening. Head symptoms continue; pulse slow, soft, and compressible.

30, morning. Appearance much better; lost all anxiety of countenance; face a natural colour; inflammation of parotid gland subsided; tongue clean and moist.

31, morning. Improving; effervescing draught.

June 1. Convalescent.

I have observed in two-thirds of the patients admitted to the hospital for this fever, that one or other of the parotid glands were swollen. Bleeding from the nose also is common. I invariably have found that leeching the temples, or back of the neck,

aggravates the head symptoms in typhus fever, although the bleeding from the nose appears to be a hint from nature to do so. Expectoration is one of the best and surest symptoms of recovery.

The following case was, perhaps, one of the severest we had to deal with. He is still in the hospital in a weakly state.

John Calaghan, aged 39; a tall, thin, rather emaciated man, who was well known as a hard living fellow, was admitted to the hospital on the 23rd of April, 1838, with the symptoms above described, in the first stage of fever; was purged with calomel previous to his admission to the hospital.

Calomel, gr. x.; Lemonade.

24, morning. Head symptoms commenced; tongue dry; skin tinged yellow. *Pil. hydrarg.* gr. v., night and morning.

25. Blister to the back of the neck; cold affusions to head. *Blue pill*, gr. v., night and morning.

26. Pulse small, hard, frequent, and incompressible.

Blue pill, gr. iij.;

Extract of colocynth, gr. v., immediately; Lemonade.

27. Head symptoms better; tongue dry, black, and chapped; pulse unaltered. *Calomel*, gr. v., night and morning.

28. Head considerably affected, talking at times incoherently; pulse small, quick, and irritable; tongue dry, and covered with a dark brown crust; bowels not opened. Purgative enema; *calomel*, gr. vi.

29. Passed a restless night; very incoherent; considerably depressed; pulse quick, feeble, and intermitting; tongue as yesterday, with total incapacity of protruding it; countenance dejected; bowels not acted on by the enema. Repeat enema at once. Half an ounce of sherry every two hours.

29, evening. No improvement; twitching of the tendons, with slight hiccough. Enema acted.

Blue pill, gr. v.;

Opium, gr. i., at once. An ounce of sherry every three hours, with effervescing draught every four hours.

30, morning. Passed a quiet night; some slight improvement; pulse fuller and more regular; tongue still dry, and coated; bowels open; hiccough not so troublesome.

Blue pill, gr. v.;

Opium, gr. i. Sherry as yesterday.

30, evening. Continues better. Repeat medicine and wine.

May 1. Pulse full and laboured; tongue more moist, and able to protrude it; bowels open; no hiccough, or twitching; perfectly rational, and able to raise himself in bed, to get drink. Effervescing draught every three hours; half an ounce of sherry every hour. *Blue pill*, gr. v.

2. Mouth affected by mercury; pulse full, laboured, and slow; complains of excessive debility. An ounce of sherry every hour. Wished for milk, and was allowed it.

3. In the same state; allowed chicken broth. Wine continued.

4. Convalescent; copious expectoration. This patient's skin was tinged a very deep yellow.

Trusting that the above account will fill up a vacancy in your valuable periodical, I have the honour to be, Sir, your obedient servant,

WILLIAM LARDNER,
Surgeon to the British Auxiliary Brigade.

San Sebastian, June 1, 1838.

MEMOIR ON THE STRUCTURE
OF THE
NEGRO'S SKIN.

BY
W. JUDD, M.R.C.S., and Surgeon in the Guards.

Discoveries connected with the reproduction of the colouring matter in the skin of the African Negro. The spontaneous disappearance, in patches, of colouring matter; and a similar matter found in some parts of the European. On the structure and use of the perspirative, or epidermoid, glands. On deciduous hair, with a description of its sacculi; and on permanent hair, its bulbs, and glands.

To the Editor of THE LANCET.

SIR:—Observing in your useful Journal two lectures* by Dr. Wallace, of Dublin, on the structure and diseases of the skin, I am happy to find that that gentleman has repeated and made known to the Irish public the results of some experiments, similar to a long series made by me in London, during 1834 and 5, the greater part of which were published in a chapter on the "Dermoid Coverings," in my Treatise on Syphilis, in the year 1836. Considering the extreme difficulty of such minute investigations, I regard it as very satisfactory that he should (with few exceptions) have arrived at the same conclusions as myself. During some years past I have made various attempts to examine into the nature of the colouring matter in the skin of the African negro, and its mode of reproduction; and now that the attention of the profession is again drawn to this interesting subject, perhaps the following short notes, containing two or three recent discoveries, may not prove unacceptable to your readers.

I.—*On the reproduction of colour in the skin of the African negro.*

—— ætat. 50, a curley-headed negro, of African origin, with black hair, and a skin

* Only two lectures had appeared, in November, when this paper was begun.

almost the colour of fresh roasted coffee, had a blister applied to him during 24 hours.

On the 2nd day afterwards several inches of brown cuticle were stripped from the vesicated surface, and two irregular pieces of rete mucosum came away with it.

3d day. The portions of cutis-vera recently denuded (of rete) are as fair as that of any European, but the greater part of the vesicated surface still retains its dark colour. A discharge of glutinous serum has commenced for the purpose of reparation.

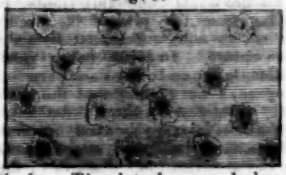
5th day. The quantity of serum discharged, and the irritation induced, are greater than commonly met with after a similar application to the white person.

6th day. The portion of cutis-vera denuded is of a bright rose colour, but part of the discharge seems to be changed from serum to pus.

8th day. Several small brownish-black dots (visible through a compound lens) each about the size of a needle-point, have been observed, at almost equal distances apart, in the cutis.

10th day. The brownish-black dots have increased in size, and are situated in pits close to the angles of the lines that form the patterns in the skin.

Fig. 1.



14th day. The dots become darker and larger, are still extending, and seem to diffuse a brownish colour beyond their precincts.

16th day. The dark-brown colour has diffused itself over a larger circumference from the central dark dots in the cutis, and is encroaching upon and lessening the denuded rose-coloured surfaces.

19th day. The parts occupied by the black dots have become almost as dark as themselves, whilst the colouring matter lies in brown zones around them, and is lighter the further it is from their centres. A brown deposition is observed about a leash of vessels at the inner part of the white tunica conjunctiva of his eyes. This is common amongst blacks, and is almost similar in colour to their rete mucosum and dark irides.

23rd day. The newly-formed brown colour now hides a larger portion of the lately denuded cutis than the ulcerated patches, which remain white, although covered by new cuticle. The brown colouring matter encroaches on, and has tinged a still larger portion of the angles of each lozenge of skin in their vicinity.

24th day. Doubtless these are the spots in which the progress of secreting the colouring matter to the mucus of the rete goes on; for now the parts in their vicinity have become darker than the original, and more than two-thirds of the whole denuded surface around them have been restored nearly to its proper depth of colour.

28th day. The tint has gone on spreading from the angles of the patterns and pits until most of the newly-formed surface has been coloured, save where these parts, as well as the rete, had been destroyed by ulceration penetrating the cutis; in the latter they remain white, except as far as they are sprinkled by a coloured dot or two, which had escaped destruction.

40th day. The blackish-brown colour, in the part lately blistered, becomes still more intense.

47th day. The newly-formed rete is now within a shade as dark as the rest of his skin; the colour-secreting parts are seen in it like dots of jet. The two patches still remain white; and although there is, as before stated, a black dot or two in them, no colouring matter appears to spread from thence to restore the original tint to the lately ulcerated parts of the cutis vera.

A preparation of the part whence this description has been written is reserved for the inspection of my physiological friends. They will observe that I have separated a portion of the newly-formed cuticle and rete from the cutis, at the place lately blistered, and, on reflecting them, have found the regenerated cuticle a continuous and perfect membrane, but the rete imperfect, as it had only been reproduced in parts where its colouring matter lay in circles and many lines. This colouring evidently was composed in largest quantity of round, white, glandular bodies, in pits, near the angles formed by lines in the skin, but so thinly spread under the latter as to leave them nearly white, although it was plentiful on each side of their attachments. The cutis itself was found colourless as usual, except, indeed, near its boundary, and there some of the pits had a defined brown tinge, and in them there remained either undetached white glands, or remnants of adherent rete mucosum.

I shall next give some account of a lusus naturæ that came under my observation about a year since, being of a kind closely connected with this part of physiology.

II.—*On a spontaneous absorption of colour in patches from the skin of the African.*

—— ætat. 47 On the black skin of this negro I chanced to observed a round white spot, which excited my curiosity, and, on inquiring into its history, I was shown several others, in various parts of his person. He stated, that being in bad health, twelve months ago, the white spots appeared

slowly one after another, then gradually increased to this present size, and since have remained stationary. These spots vary in diameter from the size of a shilling to that of a crown-piece; they are level with the surrounding black surface; the white portions of cuticle covering them, retain their original lines and structure; they are smooth, not unusually glossy, and have all the appearance of being perfect and healthy. He has neither had ulceration, eruption, nor any external cause to account for the curious change; and I cannot doubt the truth of their history, as given by this artless man. I made a preparation of one of them, which is also in my possession. This white spot measured eighteen lines across, being surrounded by as dark a colour as that of the rest of his body; the black terminated by shades, at the circumference of the white, by an irregular line, somewhat indented by the transverse lines of the neighbouring dark skin. The cuticle I turned back perfect, and it was found here and there studded by endermoid glands, a large portion that covered the centre of the spot being perfectly white,* in which respect it differed in toto from the *brown epidermis* of the rest of this African; for it was whiter than that of many Europeans. About one-sixth of the radius from the centre of the spot very slight buffy traces of colouring matter were apparent; they increased, and gradually became browner and deeper in tint to the confines of the circle, where it suddenly was black, being there lined by full coloured rete mucosum. From coagulation produced by liquor aluminis, and experiments after maceration, a thin colourless rete was traced over the whole white patch, which was more evident as it approached the brown and black confines of the circle, where it became as strong and dark as any I had previously seen. The corresponding surface of the cutis was white; but within a line or two of the circumference, like the rete and cuticle, it also had a slight brown, corresponding tinge, and here and there a dark dot, just proving the existence of a very limited portion of colouring matter in some of these pits, in which an opaque white gland might occasionally be traced; but they were not nearly so large or so numerous as on the blacker part of the rete.

III.—*On the colouring matter in the black, and its similarity to that discovered in certain parts of the white person.*

The colour in the skin of the negro appears, to the eye of a superficial observer, to be formed of an uniform brownish-black coat; but when the rete is detached with the cuticle,† and its inner surface examined by the microscope, (to ascertain the cause of the colour), it will be found to present the appearance of having had a reddish-brown fluid poured out upon it, in almost parallel wavy lines, lengthwise of the patterns in the skin, and as if these principal streams had interminglied with cross currents, bearing oval and round interstices of various sizes, mostly inclined in one direction from left to right, and vice versa on the opposite side of the body. Let the rete next be held aslant to slight rays of sunshine, and examined closely through a powerful double lens, or magnified 600 times, and it will at once be perceived that that this colouring fluid is itself deposited in extremely minute drops, or dots, at least so it appears when dried. I am prevented from considering that this point, as to nature's mode of colouring the skin, has been settled by Breschet and Roussel de Vauzeme. I can discern ducts containing similar colour entering from the pits of the cutis; but they are so minute I cannot be certain of their nature. In skin taken from the scrotum, labia, and other dark parts † of the European, I have found that the colouring matter of the rete in those situations (with exception of intensity), exactly corresponds in deposition, in figure, and colour with that of the African just described; the only difference being, that in the first it is secreted in smaller quantity, forming a thinner layer, and therefore does not give so deep a tint to be reflected through the white cuticle of the former, as through the brown one of the latter race; and the darker colour of the last named membrane (from its contact with the rete) tends not a little to influence the ultimate colour reflected. In this newly-discovered similarity of colouring matter, what a beautiful link is presented by nature for setting aside the vain speculation of man as to superior distinction, by identifying the white with the coloured races of the earth as members of one great family, as being of one and the same creation.

Fig. 2.

The quantity and quality of the colouring matter secreted in persons of all nations appears to depend much on the vigour of body in the individual. If the European be in strong health, the rete is yellowish-brown, the eye is bright, and the hair is glossy. Take the negro in good condition, his rete being full of colour, he is almost black, his

* A fine instance this of vitality and absorption acting on the cuticle.

† The cuticle in this race is dark-brown, though transparent; in us it is almost white.

† It is the darker coloured rete that gives shade to skin tanned by the sun, and also to the brunette.

eye is sparkling, and his hair strongly curled. If the white man suffers long sickness, his rete becomes pale, or sallow, his hair rough, and his eye dim. Let the black man become emaciated, his rete changes almost to gray, his hair becomes scanty and his eyes lack their lustre.* The colouring matter is secreted very sparingly, and is probably imperfect, prior to birth, for the infant of the negress, when first born, is of a yellowish-orange colour, little darker than the white; and such a slight difference is there, that the medical attendant is often obliged to inspect the scrotum (its darkest part) to ascertain whether it is the offspring of a white, or of a black father. But after the rete has been exposed some days to the influence of light, it gradually assumes nearly the hue of its parents. About two years, however, must elapse before its skin acquires its full depth of colour. The secretion of the colouring matter appears to be an arduous effort of the constitution, and this process seems to go on scantily, not only before birth, but especially in old age; for the aged negro loses colour, and "the jetty stripes left by the lash become white as their possessor gets into years."† Now, having observed that the quantity of colouring fluid secreted varies under particular states of health and disease, and having considered these instances of local change, we can have no difficulty in believing that the cessation of the secretion of this pigment, does, at times, occur in patches, and that on absorption removing from the rete and cuticle of these spots, the colour already deposited, the parts becomes white; this at once accounts for the lusus described. No doubt there is a constant supply of colouring matter commonly secreted, and as constant an absorption of it going on, similar to the process known to take place in all the serous membranes of the body. Hence I cannot consider the circumstance of the rete in the black man becoming white in spots, as more extraordinary than the rete of the white man becoming brown in spots,‡ or than a single lock, in a dark head of hair, being changed to white §; during illness; or than the yellow fœtus growing black, or the jetty stripe being changed to white; nor so much so as, the blue eye and red hair of the fair skinned girl assuming a permanent black colour, from small-pox.‖

IV.—*On the structure and use of the epidermoid glands.*

The cuticle, though so thin in itself, contains, or is connected with, so many organic parts as to preclude even a cursory notice of them in the limits of a paper; yet I cannot omit some account of a numerous set of white bodies that are most easily found in the skin of the black. They have been recently mentioned by my acquaintance, the late Dr. Wallace, as epidermoid, or perspiration glands. Their size is just sufficient to enable them to be seen with difficulty; they stand out from the inner surface of the cuticle and rete, looking (to the naked eye) like particles of dust; they are placed rather irregularly in the skin; generally there is one in the centre, or most prominent part, of each lozenge, or pattern of the cuticle; at times there are two, three, or even more. In the latter case some may be observed near to, but seldom under, the cuticular lines; in some parts of the palms of the hands and soles of the feet these bodies are arranged in alternating rows. In the microscope they are seen sprinkling the under surface of the cuticle; they seem to be hollow, white, spheroidal bodies, formed of semi-transparent albumen, with very polished surfaces; at their base, one here and there may be seen to have a short slender tube, or peduncle, terminating in a point.

Fig. 3.

They seem to have a light spot on their surface, from reflection of light; in many this is surrounded by a dark ring. On viewing the exterior of the cuticle covering these glands, there may be seen furfuracious, dusty white spots (fig. 1 section). The cuticle over them is far thinner here than elsewhere, with a little rise, so that the glands may be distinguished through it, and each sphere on this, its upper side, appears to have a black dot in the centre, instead of a light one, as on the opposite side; and in some it is surrounded by a ring of dark colour. On more narrowly inspecting them, in a bright light, by assistance of a double lens of two-tenths focus, it became evident that immediately over these spheroids there was a slight depression in the rises of the cuticle (fig. 1), resembling a lacuna; in others, where the mouth chanced to remain open, it appeared most distinctly that they were the entrances into cavities; and after more frequently inspecting these minute parts, I perceived one cellule, in others two, if not three, cellules in each, opening upon the surface of the cuticle, in the thinnest part, and surrounded by a collar of thicker matter (figs. 4 & 5). These bodies are, as to shape and colour, in every respect distinct from the follicles and sheaths of the

* For the latter fact I am indebted to Dr. Hancock.

† Vide Treatise on Syphilis, p. 123.

‡ As in epheldiis.

§ Vide LANCET, January 1834.

‖ This I have seen in a female.

hair; the cuticle covers the upper part of each gland, and the cutis is in contact with the lower; but there is a deficiency of rete where they lie, so that nothing intervenes to cut off the direct communication between the cutis, the bodies, and the cuticle. This peculiar anatomical structure leads me to suspect that these cells may act, during the exosmose, or transmission of perspiration, like a sponge in a filter. That fluid makes its exit through hundreds of pores, but always by two or three star-like ones, over these glands, which are larger than the rest, as may be seen by aid of the Stanhopian-glass. These mouths appear equally well calculated to imbibe also; and I found in one of them sol. cupri sulph. that had been applied in its neighbourhood. It should have been remarked that the above described are totally different from the deep-seated glands, to which this office is attributed in the able researches of Breschet and Roussel de Vauzème. Similar bodies exist in the skin of the white man; but they are, as might be anticipated, larger and fifty times more numerous in that of the black, a circumstance, it must be allowed, highly confirmatory of the former expectation, as the high temperature endured by generations of the latter race would of course cause a far greater development of organs so perpetually in use. This anatomical principle may serve to explain the reason of the European constitution being so little capable of adapting itself to hot climates, when compared with that of the African. In the latter race the glands are often encircled by a perceptible ridge of colouring matter. If perspiration be the function performed by these bodies, the most extraordinary fact remains yet to be stated, viz., that these glands are continually shed during life, and, I conclude, as often regenerated; for I have detected two or three of them in a single scale from the healthy cuticle, and a greater number in portions of skin detached during psoriasis palmaria. New ones must be formed, I apprehend, to replace them, or the body perishes for want of the performance of their function. Dr. Wallace states that these glands are all turned black, or removed, with the cuticle; but, in my experiments, I have uniformly found twice the number remained with the rete, and when it is removed many even then were left adhering to the cutis.

There is yet another set of bodies, all of them situated in the cuticle, also looking like glands, but too minute to be visible to the unassisted eye, and scarcely so by aid of a double lens. From appearance and situation I have no right to consider them to be the last described class of bodies in a state of formation, nor are they the ultimate organic particles of which the texture of the skin is composed. I have been unable to trace any duct running from them, and cannot, at present, even venture a conjecture as to their office.

I shall next describe two very curious, but little noticed appendages to the dermoid coverings.

V.—*Of the dwarf hair and the long hair; their structure and difference.*

First I should like to ask,—Is the general dwarf hair of the human body a separate and distinct appendage from the long hair? I believe that it is; for at a very early period the entire skin, and in particular the face and scalp of the fœtus in utero, are covered with millions of filaments of the former, months before there appears a hair of the latter kind upon its head. Brute creatures also have dwarf hair concealed by their long hair, and the spermaceti whale is said to possess it, even under his cuticle. The dwarf-hair filaments generally rise from the eminences of the cuticle, but the long hair usually passes out of its depressions. The dwarf-hair appears to be a colourless, tubular prolongation of the cuticle, whilst the long hair tube is coloured from its origin below the cutis. Each dwarf-hair filament is completely enveloped by a process from the cuticle; but the long hair appears to receive only a partial sheath as it passes through it. The sacculi of the dwarf-hair lie superficially in the skin; the bulbs of the long hair, on the contrary, lie deep in the cellular membrane below the cutis. A long hair can be traced through the greater part of its transparent glands; the dwarf-hair cannot be seen until emerging from its sacculi. Dwarf hair, in us, appears to decrease in the number of its filaments as the body is developed; whilst the true hair, on the contrary, seems to increase from adolescence to middle age. There is a memorandum, by the late Mr. Hunter (vide catalogue of the Museum of the Royal Coll. Sur. Part ii,) that appears to me to explain these facts. He states, that "Hair is of two kinds of growth, one that grows to its full extent and then becomes stationary, and another that grows until it arrives at its full extent, and then must be shed, and that man has both sorts." Now, as the dwarf-hair may be seen in all stages of progressive formation, from the most diminutive thickening of the cuticle to filaments so large and so coarse as to resemble long hair, and since no author (as far as I know) has accounted for its disappearance, may not the delicate dwarf-pile of children be gradually changed into the deciduous, or second, kind of hair observed in the adult? And am I not borne out in this belief by the fact of the shedding of their filaments,† and by the superficiality of their sacculi, compared with those of the long hair. Taking it for granted that such

† By help of the Stanhopian glass, debris of scales and portions of down may be seen to be constantly detached from the surface of our skin.

really is the case, I shall henceforward describe them under the distinctive appellations of the "Deciduous" and the "Permanent" hair.

Most of the deciduous hair, or down, is so fine that it can scarcely be seen by the eye, unless a portion of skin, outside upwards, is held in a slanting position on purpose, with a good light beyond it; even a magnifying glass will not always enable you to detect it, except the object of search be placed as above directed. The filaments of the deciduous hair in the microscope mark its shape by a single outline, as being a simple tube becoming broader at its base. (Vide fig. 1.) That outline is probably occasioned by the shade of its envelope from the cuticle, which in shape resembles the finger of a glove, and is as easily stripped and inverted, after blistering.

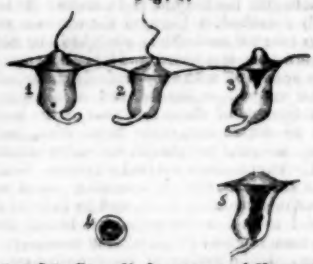
The base of the deciduous hair is a conical projection in the cuticle; its new formed filament lies curled up and concealed under a little prominence in the centre of the scale covering each lozenge space. (Vide fig. 2.) When about to pass out the superincumbent scale has a black dot on its summit, becomes browner, and is disposed to desquamate. If that process be then artificially completed by the end of a probe, or a scratch with the nail, the concealed filament instantly uncoils and erects itself into view, carrying and supporting on its apex the scale that covered it a moment before.

Fig. 4.

1. The down envelope.
2. The covering scale.
3. The uncoiling filament.
4. The process completed, by the detachment of the scale from the apex.
5. Patterns, or lozenges, formed by lines in the skin.

At times two or three filaments pass out from under one scale; this depends upon several folliculi being set close together. The deciduous hair sacculi lie under the cuticle shaped almost like a vase, and are formed of semi-transparent albuminous matter. At their lower part they terminate by a slender tube, to which I have traced a delicate white thread, which I believe is their nutrient vessel; and near the top of a few sacculi may be noticed a triangular shade, before the filament has passed out.

Fig. 5.



1 and 2. Sacculi, foramen, and filament.
3. Dark shade in its centre.
4. Transverse section at its centre.
5. Longitudinal section.

(Fig. 3.) In some few I have seen a dot on this side, which I take to be a foramen. (Fig. 1.) If a sacculus is placed on a hard surface a transverse section may be made, across with the point of a lancet, when a round shade may be observed on the end of with the assistance of a lens, by cutting it each portion, as if a cylinder had been divided (fig. 4). I also tried to make a longitudinal division, and after many attempts succeeded with about six, but could not observe more than a shade running lengthwise within them (fig. 5). I am led to conclude that, when dried, they are hollow, but that in their natural state they contain a glandular apparatus of great delicacy. These sacculi occupy slight pits on the surface of the cutis, but not the deep ones that leave marks and give exit to permanent hair; deciduous hair generally comes away with the rete and cuticle. When numerous their projection on the surface constitutes the appearance termed gooseskin.* At times the filaments of the deciduous hair seem to have difficulty in projecting themselves, and then one here and there instead of, as ordinarily, piercing the superincumbent scale of the lozenge pattern, makes its apppearance under the edge. These points in some skins are too minute to be seen; but in others, where the features are larger and well marked, or under disease, the saccules may be collected, and at times they will be found the 15th of an inch in length.

VI.—*Of the permanent hair, its structure and situation.*

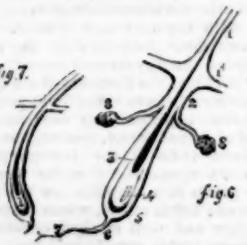
Permanent hair, such as that of the scalp, the whiskers, and the pubes, pierces the

* And not the projection of the cendermoid glands, as stated by Dr. Wallace.

cutis, rete, and cuticle, passes through perforations out of deep pits in the former, and may be obtai ned and examined in the following way:—When the surface of the body is beginning to undergo slight putrefaction, and the cuticle is in a state to be easily detached, a piece of the scrotum or scalp may be moderately stretched, by aid of a few pins on a board, and its cuticle carefully pushed off with a piece of silver, shaped like a scalpel, or the flat end of a probe. By this mode of dissection part of the hair will be drawn out, some hairs with, but many without, their glands, and a few others will remain in their natural situation. Next slide the skins, one upon another, so as to slant the remaining roots, and by help of a good lens and a sharp-pointed lancet the coloured hair and its gland may be removed entire. If the surface of the denuded cutis be now examined with a glass no openings can be traced through which the hairs were extracted, which has led many to assert that the hair has its roots above the cutis. Now, take the remainder of the skin, pinned to the board, and expose it two or three days to a slight desiccation, until its surface is about to become hard and dry, and on turning out the remaining hairs by the silver instrument, as before described, the orifices from whence they passed will be found gaping and visible; and if further proof be required any of the hair-glands that remain may be traced, being buried in the cellular membrane and fat beneath the cutis vera.

On inspecting the permanent hair and its gland in the microscope its figure may be seen marked out by three lines, it being a coloured tube contained within a transparent sheath. The coloured part gradually becomes a little thicker, as it comes to an abrupt termination within its gland. This latter apparatus is much more cylindrical than the deciduous saeculus. It is very handsome, formed of a white albumen so transparent that the termination of the coloured portion of the hair can be readily seen within it (3); and in a few a denser semispherical mass may be detected at the bottom of the apparatus, which probably is its albumen-secreting-gland, shrunk and dried (5). The minute tube (which becomes a mere line) at its lower part is most likely for the entrance of vessels (6). The permanent hair apparatus is totally different in its slender make, transparency and contents totally different from the thick and short deciduous saccules, through the sides of which nothing can be distinguished. The curious convoluted white sebaceous glands of the hair described by Gurlt, I have dissected and depicted. (Vide 8, fig. 6.) The cuticle sends off a delicate long sheath upwards to envelope the permanent hair (1), and another downwards to within a short distance of the bulb (2); but whether the membrane splits into two layers to form them I cannot make out; most likely it does. The hair becomes gradually more slender until its upward extremity terminates in an apex, that is, if it has never been cut. When a hair comes away during dissection it always separates below the cutis, just at the junction of the coloured portion with the transparent cylinder that incloses its bulb. The hair of each part has its distinctive peculiarities; the hairs of the scalp are stronger, their colouring matter is darker, and generally they have a curve just above their bulb, which, if considerable, gives a disposition to curl (vide fig. 7); and I may add, that piercing the skin obliquely gives, in addition, the direction they may slant or lie in in all creatures.

Figs. 6 and 7.



1. Upper cuticular sheath.
*1. The level of the cuticle.
2. Lower cuticular sheath.
3. Coloured bulb and tube.
4. Apparatus, or cylinder.
5. Its gland, probably.
6. A slender tube.
7. A mere thread, most likely of nerves and vessels.
8. Sebaceous glands.

I have been induced to give a figure of a magnified hair from not having seen a correct and distinct one in the work of any author. Rayer's is the best, but he appears to me, by some accident, to have taken as an instance the deciduous hair-bulb instead of the permanent one, in the figures in his plate.

Having described the structure and peculiarities of regenerated cuticle in the Ethiopian and European, and the phenomena presented by small-pox and injuries to the cutis in both races, also the changes worked in the skin during scarlatina, erysipelas, rupia, tubercles, etc., in the chapter before alluded to; and after thanking Mr. Lane for supplying me with portions of skin, I shall conclude a communication which has exceeded in extent that originally intended.

ON THE

MORTALITY AND DISEASES OF EUROPEANS AND NATIVES IN THE EAST INDIES.

By T. R. EDMONDS, *Esq.*, *London*.

THE army of the British possessions in the East Indies comprises more than one half of the total number of soldiers subject to the orders of the British Government. This army is composed partly of Native and partly of European troops; the officers are all British. The Native troops amount to 80,000, the European troops to 35,000 men; of the latter, about 23,000 are King's troops, and the remaining 12,000 are East India Company's troops, cavalry, and "European Regiments," officered in the same manner as the Native troops.

The total regular army of Great Britain, on the peace establishment, commonly amounts to 110,000 men; of these about 50,000 are stationed in Great Britain and Ireland, 23,000 in the East Indies, and 37,000 in other foreign parts. The East Indian army, King's troops, and Company's troops together, amounts to 115,000 privates and 5750 officers; the British regular army stationed at home, and in every other part of the world, except the East Indies, amounts to 87,000 privates and 4350 officers. The number of British officers serving in the East Indies is to the number of British officers serving in all other foreign parts, in the proportion of 5750 to 1850, or as three to one nearly. The number of British private soldiers stationed in the East Indies is, however, just equal to the number of British private soldiers stationed in all other foreign parts.

It is well known that the climate of the East Indies is injurious to the constitutions of the natives of Great Britain; but the degree in which this climate increases the sickness and mortality of Europeans has been rarely investigated. The importance of the subject is manifest, when it is considered that there are 42,750 British troops (officers and privates) stationed in the East Indies. If these troops had been serving in England, the average annual loss by death would have been 701 (72 officers and 629 privates, reckoning the mortality of officers at 1.2 per cent., and that of privates at 1.7 per cent). But the number of deaths which occurred on these troops serving in India, was 2200, or three times as many as would have occurred on the same force at home. The vacancies caused by death in the European part of the Indian army require a yearly supply of 2300 men. This is the case during peace; on the breaking out of an extensive Indian war the number required will be increased two or threefold. The cost of recruiting the European portion of the Indian army is extraordinarily great; for, in addition to bounty money, and maintenance whilst learning to perform their future duties, the recruits cost the price of their conveyance by ship from England to the East Indies. In time of war the cost of each recruit will probably be twice as high as the cost during peace; if the number of recruits required be doubled, the total cost of recruiting will probably be quadrupled. On account of the very great difficulty in the recruiting of the European troops in India, the preservation of their health, and the (consequent) diminution of their mortality, is deserving of the best attention of the Government and of the British public. Inquiries might be prosecuted with the view of ascertaining the relative degree of healthiness of the three Presidencies, and of different parts of each Presidency. The consequence, in practice, of the knowledge of the relative healthiness of different localities would probably be, the accumulation of troops in the healthy districts, by abstracting from the numbers now stationed in the unhealthy districts. The expenditure of human life might thus be greatly economised, and a great saving would be effected on the cost of recruiting. It might, however, be necessary to incur some additional expense, in improving the means of communication between distant points, in order that the troops might be rapidly conveyed, when necessary, from the healthy to the unhealthy districts.

In order to obtain a correct measure of the relative salubrity of different parts of India, it is necessary to compare similar classes of resident Europeans with each other. The mortality of civil servants residing in any district cannot with advantage be directly compared with the mortality of military servants residing in another district. In all the Presidencies the mortality of the military in time of peace, is considerably greater than that of civilians. The mortality of surgeons and assistant-surgeons also greatly exceeds that of civilians in all the Presidencies. The mortality of officers of infantry is also found to exceed invariably the mortality of officers of cavalry or artillery. In some parts of the East Indies a difference in the ages of the officers observed, is accompanied by a much greater difference in the mortality than in other parts. The difference on account of age is least when the general mortality is the greatest.

In the present investigation of the mortality among Europeans in the East Indies, the requisite information has been collected chiefly from the "East India Annual Registers" for 20 years, ending with the Register

for 1829. In addition to that derived from the Registers, some valuable information has been obtained from other sources not generally accessible. In the Registers are published yearly returns for each Presidency of all the officers living in the Company's service; the name, rank, and regiment of each officer being distinguished. In the same Registers are published yearly returns of the deaths among these officers, the place and date of each death being distinguished. These data suffice for the determination of the mortality (or the relation of the dying to the living), of any rank of officers in either of the three Presidencies. For the purposes of an inquiry like the present, it would have been preferable that the officers had been distinguished according to age instead of according to rank. In consequence, however, of the age of entering the Company's service being fixed within very narrow limits (a cadet must be above 16 and under 18 years of age), and in consequence of the officers rising in their respective regiments by seniority alone, it happens that the distinction of the mortality according to rank is nearly as valuable as the distinction according to age would have been. In the case of one Presidency, however, I have been able to obtain returns in which the ages have been distinguished. The results exhibited in Table 3 have been derived from official returns of the living and dying, for every year of age, in the Madras army, during each of 22 years, 1808—1829.* With respect to the civil servants in each of the three Presidencies, their ages are easily ascertainable, as near as can be desired for any useful purpose, because the year of appointment is printed opposite to each name in the "East India Register." In the calculations, of which the results are herewith exhibited, each "writer" has been assumed to be aged 20 years at the date of appointment; according to the regulations, he must be above 18 and under 22 years of age, at the time of appointment.

The data supplied in the "East India Registers" relate to officers alone. They serve, however, indirectly to indicate the mortality of private soldiers, because the mortality of the latter is generally 40 or 50 per cent. greater than that of their officers, in all parts of the world.† Direct evidence as to the relative mortality of officers and privates in the East Indies, exists in the returns of the Army kept at the Adjutant-General's Office. In the year 1829 I obtained from this office returns of the living and dying for five years, 1823—1827, in the greater number of King's regiments stationed in India. On account, however, of the war in Ava and at Bhurtpoor, in 1825 and 1826, in which a large proportion of King's troops was employed, the value of the observation has been diminished, at least in one respect,—that of ascertaining the relative and absolute mortality of officers and privates during peace. The results of these returns are stated in Table 4; it will be seen that the mortality of privates of King's regiments employed in the Burmese war was 25 per cent. per annum for two years. I have obtained a statement of the numbers of privates belonging to King's regiments who died by different diseases. During the Burmese war the deaths from disease of the liver decreased, although the deaths from all causes were increased threefold. The deaths from fever during this war were very numerous, absolutely as well as relatively to deaths from other diseases. This excess in the mortality from fever has been commonly ascribed to a peculiar unhealthiness in the climate of Rangoon and its vicinity. It is not, however, improbable that a similar increase of mortality from fever would have occurred, if the troops had been encamped and employed in active service in any other part of the East Indies.

In Table 5 is exhibited the more valuable portion of a return for three years, 1827, 1828, and 1829, of the deaths and sickness which occurred in the total troops of the East India Company, distinguishing Natives from Europeans, the former amounting to 77,432, and the latter to 11,877 men. In the original return the deaths, the cases of sickness, and the remaining in hospital, are distinguished under 25 heads of disease, alphabetically arranged. From this return it appears that the mortality of Europeans is more than three times as great as that of natives (the mortality suffered by the Native troops is less, in a small degree, than that of European soldiers at home). The average annual mortality of the European troops during the three years was 5.33 per cent.; that of Natives during the same period was 1.43 per cent. It is worthy of remark, that the mortality of Europeans, during the three years, decreased successively as the mortality of Natives decreased. The mortalities of Europeans during the years 1827, 1828, and 1829, were 7.14, 5.35, and 3.52 per cent. respectively; of Natives during the same years, the mortalities were 1.62, 1.48, and 1.17, respectively. From this it may be inferred, that an increase or diminution of fatal disease among Euro-

* The total deaths in these returns (prepared in India) were less than those in the Registers. On account of this discrepancy the relative mortality only, at each age, has been deduced from these returns. The absolute mortality in the Table is that indicated by the Registers.

† Even in times of war this relation between the mortalities of officers and privates is preserved. See LANCET, April 28th, 1838.

peans, is accompanied by a proportional increase or decrease of fatal disease among Natives. It would seem that an epidemic influence cannot be baneful to Europeans in India, without being also baneful, though in an inferior degree, to natives. If an epidemic causes four deaths on a given number of Europeans, it will probably cause one death on the same number of natives.

The return above-mentioned also supplies some valuable information respecting the prevalence of different diseases, and respecting the duration and severity of the sickness produced by them. On inspection of the Table it will be seen that the average duration of a case of sickness is 18 days for Europeans, and 22 days for natives. Every 100 Europeans suffer yearly 187 attacks of sickness; every 100 Natives suffer yearly 55 attacks of sickness; about one half of these attacks are from minor diseases, which are rarely fatal. Out of every 100 attacks of sickness 2.86 terminate in death among Europeans, and 2.63 terminate in death among Native troops. Of Europeans there are 9.20 per cent. of the living constantly sick; of Natives the proportion constantly sick is 3.22 per cent. To every death there is one year and nine months of sickness among Europeans, and two years and a quarter of sickness among Natives. The deaths and sickness from dysentery and liver complaint form nearly one half of the total deaths and sickness of European soldiers in India. The public possesses very little information respecting the diseases and sickness of European soldiers at home. The present returns of sickness of Native troops in India may be considered as applicable, in a great measure, to European troops at home; and on that account may be esteemed of more than ordinary value until information of a similar kind relating to European soldiers at home can be directly obtained.

TRINCOMALIE, a military station in the island of Ceylon, is commonly considered to be more unhealthy than any other part of the East Indies. The force stationed there consists of 300 European King's troops, and an equal number of Native troops. I have obtained returns of this force, for three years, drawn up with great care by one of the medical officers belonging to the force. In these returns a monthly statement is made of the numbers attacked and the numbers remaining sick of any disease, for the years 1829, 30, 31, Natives and Europeans being distinguished. The observation was not sufficiently extensively to warrant the drawing of any positive conclusion respecting the average mortality at Trincomalie, for a long period of time. It is, however, remarkable that the average mortality, during the three years of observation, coincides very nearly with the mortality observed in the Madras Presidency at nearly the same time,—comparing King's troops with King's troops, and Native troops with Native troops. The number of cases of sickness distinguished in the present returns are sufficiently numerous to afford a useful and correct idea of the kinds of disease most prevalent at Trincomalie. The quantity of sickness (of Europeans) compared with the number of deaths, is much lower than in any other part of the East Indies. In Trincomalie there is only one year and a quarter of sickness to each death; in the East Indies generally the proportion of sickness is one year and three quarters to each death of Europeans. The sickness being separately stated for every month of the three years, supplies the materials for determining whether one season is more unhealthy than another at Trincomalie. I have closely examined the returns with this object in view, and could find no difference depending on the season of the year. This will excite no surprise when it is borne in mind, that the mean temperature of the coldest month (January) is 79°, and of the hottest month (July) is 85°, or only 6° greater. The maximum yearly temperature is 92°, the minimum 75°; the mean temperature is 83°. In several thousand observations, the greatest observed variation in twenty-four hours was 12°. The ordinary daily variation is about 4° or 5°. The N.E. monsoon blows steadily for four months, November to February, and the S.W. monsoon from May to August, also four months. During the N.E. monsoon (which blows from the sea) the air is very humid; in the S.W. monsoon the air is very dry. In the former case, the dew point is only 4° or 5° below the temperature of the atmosphere; in the latter case, evaporation (by wetting the bulb of the thermometer) causes a fall of 12° to 20°. In the three years, there were 557 clear days, 341 rainy days, and 197 cloudy days. In the three years there were 21 days in which gales of wind occurred, 16 during the N.E. and five during the S.W. monsoon.

THE MAURITIUS may be considered a portion of the British possessions in the East Indies. The diseases there prevalent among European troops, are of the same character, though diminished in force, as those prevalent on the continent of India. In the Mauritius, as in India, one half of all the deaths are from dysentery and liver complaint; and the deaths from dysentery are twice as numerous as the deaths from liver disease. During the eleven years, 1812-1822, the average military force stationed in this island amounted to 2424 men. I have obtained a return of the cases and deaths of each disease which occurred in this force during each of the eleven years. In this return 97 heads of disease are enumerated In Table 6, I have exhibited the

more remarkable of these diseases, with the number of cases and deaths which occurred during eleven years. The average annual mortality of private soldiers in the Mauritius is 3.84 per cent., which agrees very nearly with the mortality of European officers in all the East Indies. Since the mortality of private soldiers, in any foreign station, is in general 50 per cent. greater than that of officers in the same station, it may be hence inferred, that the mortality of private soldiers on the continent of India is 50 per cent. greater than in the Mauritius. a similar result will be obtained by comparing the mortality, 3.84, in the Mauritius, with 5.33, the average mortality for three years, 1827, 28, 29, of all the European troops of the East India Company. The sickness observed in the Mauritius is much severer than that observed on the continent of India; for in the Mauritius, out of 100 cases of sickness 3.84 terminate in death; whilst, on the Indian continent, only 2.86 terminate in death out of the same number of cases.

In all unhealthy climates, the mortality of resident foreigners is subject to considerable fluctuation from year to year; the fluctuation appears to be proportional to the unhealthiness of the climate. In JAMAICA, for example, where the average annual rate of mortality of European private soldiers is 16 per cent., the mortality in one year is not unfrequently so high as 28 per cent., and in another year so low as 7 per cent., the maximum being four times as great as the minimum. In the whole of the East Indies, the average annual mortality of European foot soldiers is apparently 6 per cent., the maximum is about 8 per cent., and the minimum 4 per cent., being in the proportion of two to one. The mortality of the population of any European country rarely fluctuates so much as 20 per cent., comparing years of the greatest with years of the lowest mortality, in any decennial period. The annual mortality of the populations of England and Prussia, for a considerable time past, has not fluctuated so much as 10 per cent. between the maximum and minimum; the mortality of any single year rarely differs more than 5 per cent. from the average annual mortality of the five preceding and the five succeeding years.

In addition to the yearly fluctuations, there is probably a periodical fluctuation in the mortality of the native populations of all countries. In European populations it is commonly found, that the mortality decreases step by step through four or five quinquennial periods, and then increases by the same gradations as it had previously decreased. It is very probable that the mortality of the native population of India is subject to similar periodical fluctuations, and that the mortality of European residents suffers a contemporaneous fluctuation.

On inspection of Table 2, it may be seen, that the mortality of Europeans in the different Presidencies varied greatly during the four quinquennial periods from 1809 to 1828; in Bengal and Bombay, the fluctuation exceeded 50 per cent. In Madras and Bombay, the mortality was increasing during the first two quinquennial periods, was at a maximum during the third period, and was decreasing during the fourth quinquennial period. In Bengal, the mortality had been increasing during the four successive quinquennial periods, so that it is uncertain whether the highest observed mortality at Bengal was a maximum. Taking the three Presidencies together, the mortality of European officers during the 10 years, 1819-28, was 32 per cent. greater than during the 10 years, 1809-18. Such increase would have occurred if the mortality of natives had been 8 per cent. greater from 1819 to 1828, than it had been from 1809 to 1818, and if, at the same time, the increase in the mortality of Europeans had been four times as great as the increase in the mortality of natives, conformably to the fact observed in the three years, 1827, 1828, and 1829.

Comparing the different Presidencies with each other, BENGAL is found to be decidedly the most healthy. During 20 years, ending in April, 1828, the average annual mortality in Bengal, of majors, captains, and subalterns combined, was 3.05; in Bombay, during the same period, the mortality of the same ranks was 4.02 per cent., whilst the mortality in the Madras Presidency was 4.32 per cent. per annum. Taking all the Presidencies together, and comparing officers of Native infantry of different ranks, it is found that the average annual mortality during the 20 years was, 3¼ per cent. for ensigns, 3½ per cent. for lieutenants, 4 per cent. for captains, 4½ per cent. for majors, and 5 per cent. for colonels and generals; as may be seen on inspection of Table 1. The rate of increase according to rank, and consequently according to age, is sufficiently regular. It would seem that the mortality increases by addition of about one-half per cent. for every increase of 8 years in age. In Bengal the rate of increase in the mortality according to age, is higher than that now mentioned; in Madras and Bombay it is less.

On comparing together military officers and civilians in the East Indies, it is found that they are subject to very different rates of mortality, even in times of peace. Different classes of military officers are also subject to rates of mortality greatly differing from one another. The mortality of officers of infantry considerably exceeds the mortality of officers of cavalry or artillery, and the mortality of the latter exceeds that of civilians. The mortality of surgeons and assistant-surgeons is equal to that of infan-

try officers (allowing for the small disparity in age). The mortality of infantry private soldiers is as much greater than the mortality of infantry officers, as the mortality of the latter is greater than that of civilians.

These facts respecting the relative mortality of different classes of Europeans resident in India, appear to admit of a satisfactory explanation, since the mortality of each class is high or low, according as the quantity of bodily labour demanded of this class is high or low.

In order to maintain the efficiency of a military force it is necessary that they should be subjected to repeated drills and paradings. The fatigue from such discipline, undergone under a hot sun, is considerable, and presses much more heavily on the foot than on the cavalry, and more heavily on the private soldiers than on the officers. It can hardly be doubted that exercise or labour tends to increase the unhealthiness of an unhealthy climate; at least, such must undoubtedly be the case if the cause of unhealthiness consists in the impurity of the atmosphere, or in the diffusion through the atmosphere of miasma highly pernicious to the constitutions of Europeans. The effect of labour is to quicken the circulation, and to increase the quantity of air and pernicious miasma passing through the lungs: the results, as respects the mortality, may be anticipated. The injurious effects of spirituous liquor in hot and unhealthy climates may also be accounted for by its quickening the circulation and increasing the quantity of impure air respired. Returning to Europe, and reflecting on the well-known fact that the mortality of the labouring classes in large towns is extraordinarily great, we shall find in this case also that labour, by increasing the quantity of impure air respired, is the principal cause of this great mortality. The mortality of the middling class (or of the persons undergoing little bodily labour) in cities, is probably a little greater than the mortality of the middling class in small towns, but it is certain that the former does not exceed the latter in any degree similar to that in which the mortality of city labourers exceeds the mortality of country labourers. Labour undergone in a pure atmosphere, strengthens the human frame and increases the vital force. The mortality of agricultural labourers, in every country, is always found to be less than that of any other class.

In unhealthy climates, as in Jamaica, some months and seasons are remarkable as being peculiarly sickly or healthy, compared with the average of the year. In the East Indies, however, there is no very decided difference in the healthiness of different months, excepting February and March, which two months in each of the three Presidencies are the most healthy of the year. In Bengal the mortality is at a maximum during the three months, August, September, and October; but in the other two Presidencies the seasons at which the mortality is at a maximum are different. From the dates of 3379 deaths occurring in the three Presidencies during 20 years, I have found them to be thus distributed through the four seasons—Spring, Summer, Autumn, and Winter, 652, 887, 985, and 855. The Spring has been assumed to consist of the three months, February, March, and April; the other seasons consists of the successive three-monthly periods.

46, Regent-square, and 10, Fleet-street,
June 2, 1838.

(1.)—Table showing, for each of the Three Presidencies, the average Annual Mortality suffered by different grades of Officers during 20 years 1809—28.

	Bengal.	Madras.	Bombay.	Total.	Three Presidencies.	
					Average Living.	Total Deaths.
Native Infantry:						
Ensigns.....	2.95	3.60	3.37	3.26	380	248
Lieutenants	2.80	4.39	4.05	3.58	1384	992
Captains	3.48	4.53	4.14	3.98	551	438
Majors	4.10	4.88	4.98	4.53	130	118
All above Ranks, N. I...	3.05	4.32	4.02	3.67	2445	1796
Same of Cavalry and Artillery	2.13	3.61	3.41	2.85	571	326
Ranks higher than Major	4.67	4.94	5.75	4.95	293	290
Assistant-Surgeons	3.21	4.45	4.29	3.79	383	290
Surgeons	3.84	4.54	4.04	4.13	182	150
Civil Servants under 45..	2.02	1.94	2.73	2.10	670	282
—— above 45..	4.98	5.13	5.92	5.14	122	125

The total Officers of the Bombay Marine, amounting, on an average, to 108, suffered, during the same 20 years, the Annual Mortality of 3.99 per cent.

(2.)—TABLE showing the Mortality per Cent. per Annum, in each Presidency, of Captains and Lieutenants combined, during each of four successive quinquennial periods.

Periods of Five Years, ending in April.	Captains and Lieutenants, N.I.				Three Presidencies.	
	Bengal.	Madras.	Bombay.	Total.	Surgeons and Assist.Surgeons.	Civil, Age 25 to 45.
1813.....	2.22	3.01	2.81	2.97	3.04	1.92
1818.....	2.62	4.10	2.90	3.21	3·63	1.95
1823.....	3.29	5.08	5.33	4.30	5.18	2.32
1828.....	3.63	4.59	4.73	4.15	3·64	2.30
20 Years.....	2.99	4.43	4.08	3.70	3.90	2.11
Mean N° Living	912	712	310	1934	565	542

(3.)—TABLE showing the average Annual Mortality, at different intervals of age, of the Civil Servants in each Presidency, during 20 years, ending 1828; also, the Rate of Mortality in the Bengal Civil Service for 36 years, to 1836, according to an observation of Mr. H. T. Prinsep; also, the Rate of Mortality among the Madras Military for 22 years, ending with 1829.

Age.	Bengal.	Madras.	Bombay	Three Presidencies.	Total Deaths observed.	Bengal Civil Service according to Mr. Prinsep.	Madras Military	
							Living.	Rate.
Under 25.....	2.30	1.02	2.74	2.07	53	1.99	603	3.29
25 to 35	1.85	1.55	2.34	1.83	111	1.91	647	4.38
35 to 45	2.08	2.87	3.35	2.47	118	2.81	323	5.51
45 to 55	4.33	4.16	5.79	4.51	77	4.17	107	5 54
Above 55.....	6.40	7.33	6.45	6.65	48	.....	56	5.61
All ages	2.51	2.38	3.17	2.57	407	.....	1736	4.32
Mean N° Living	446	227	119	792	....	407	....	1736

(4.)—TABLE showing the Mortality of Officers and Privates of the King's Troops stationed at Bengal, Madras, or Bombay, during periods of five or three years, ending with 1827, distinguishing the Private Soldiers employed in the Burmese War.

OFFICERS.

Station.	Period observed.	Mean Number Living.	Total Deaths.	Annual Rate per Cent.		
				Whole Period.	Peace Three Years.	War Two Years
Bombay	five years	104	24	4.64	4.64	—
Bengal	ditto	245	94	7.67	4.63	12.25
Madras	ditto	219	100	9.14	6.85	12.57
		PRIVATE SOLDIERS.			Peace 1 year.	
Ava.....	three years	3898	2248	19.22	7.29	25.20
Bombay	five years	911	223	4.90	Three Regiments not employed in the War.	
Madras	ditto	1987	765	7.70		

(5.)—TABLE showing the Proportions of Sickness and Death, of various Diseases, which occurred during the three years 1837, 1838, and 1839

(5.)—TABLE showing the Proportions of Sickness and Death, of various Diseases, which occurred during the three years 1827, 1828, and 1829, in the total Army of the E. I. Company, amounting to 11,877 Europeans, and 77,442 Native Troops.

DISEASE.	EUROPEANS.			NATIVES.			Deaths in 100 Cases.		Mean duration of each [Case in days.]	
	For every 100 Living			For every 100 Living			Europeans.	Natives.	European.	Natives.
	Cases in one year.	Constantly Sick.	Deaths in one year.	Cases in one year.	Constantly Sick.	Deaths in one year.				
Severer Diseases :										
Fevers	37.05	1.61	0.75	15.97	0.62	0.27	2.01	1.70	15.9	14.1
Dysentery, Liver, &c...	49.78	2.55	2.75	2.69	0.10	0.18	5.53	6.66	18.7	13.0
Cholera.....	2.62	0.01	0.72	0.81	0.01	0.37	27.49	45.96	1.8	6.0
Asthma, Dropsy, &c...	6.75	0.33	0.45	0.80	0.07	0.16	6.70	20.56	17.9	30.9
Milder Dise ase :										
Rheumatism.....	9.65	0.67	0.11	5.67	0.52	0.08	1.13	1.40	25.5	33.8
Ophthalmia	9.71	0 68	0.01	0.80	0.04	0.00	0.09	0.22	25.7	18.7
Ulcers and Tumours ..	18.31	0.87	0.06	10.27	0.78	0.10	0.32	1.01	17.3	27.8
Syphilis.....	12.16	0.92	0.04	3.18	0.31	0.02	0.35	0.61	27.5	36.0
Wounds and Accidents	14.24	0.60	0.05	3.83	0.17	0.02	0.36	0.44	15.3	16.2
Severer Disease.....	96.20	4.50	4.67	20.27	0.80	0.98	4.86	4.87	17.1	14.3
Milder Disease	64.07	3.74	0.27	23.75	1.82	0.22	0.42	0.93	21.3	28.2
Unspecified Disease	26.31	0.96	0.39	10.60	0.60	0.23	1.49	2.14	13.3	20.8
Total of all kinds	186.58	9.20	5.33	54.62	3.22	1.43	2.86	2.63	18.0	21.6

Dysentery, Fever, Diarrhœa, Colic, and Inflam. Abdominalis comprehended in one Class; Asthma, Dropsy, Apoplexy, Insanity, Inflam. Cephalica, and Inflam. Thoracis, in another Class.

(6.)—TABLE showing, under different heads of Disease, the Mortality and Sickness which occurred, during Eleven Years, on the Force stationed in the Mauritius, and during Three Years on the Force stationed at Trincomalie.

DISEASE.	MAURITIUS.		TRINCOMALIE.			
	Europeans.		Europeans.		Natives.	
	Cases.	Deaths.	Cases.	Sickness in Lunar Months.	Cases.	Sickness in Lunar Months.
Fevers, continuous	2883	36	202	68	86	45
Ditto not continuous	138	8	170	54	39	10
Dysentery	3804	351	389	309	16	10
Liver	2075	178	83		2	
Cholera	438	40	43	114	3	5
Diarrhœa	992	35	28		8	
Beri Beri	87	41	—	—	—	—
Rheumatism	539	2	33	14	12	9
Ophthalmia	....	....	133	100	71	15
Ulcers and Boils	5022	10	143	52	169	148
Genito-Urinary	2749	9	77	79	21	16
Wounds and Accidents	1804	30	184	84	82	41
Pruritus and Psora	2090	0	33	19	182	102
Other Diseases	—	—	—	—	—	—
Fevers	3021	44	372	132	125	55
Diseases of Alimentary Canal	8059	646	643	454	36	18
Organs of Respiration	1370	181	32	36	7	1
Other severe Disease	617	102	50	42	16	8
Total severer Disease	13,067	973	1077	664	184	82
Milder Disease	13,612	51	602	348	537	331
Of all kinds	26,679	1024	1679	1012	721	413

(7.)—TABLE showing the Proportions of Sickness and Death of various Diseases, which occurred in the Mauritius during Eleven Years, 1811-22, on 2424 European Troops; and in Trincomalie during Three Years, 1829, 30, 31, on 296 Natives and 293 King's Troops.

DISEASE.	MAURITIUS.			TRINCOMALIE.			
	Out of 100 Living.		Deaths in 100 Cases.	100 Europeans.		100 Natives.	
	Cases in 1 year.	Deaths in 1 year.		Cases yearly.	Constantly Sick.	Cases yearly.	Constantly Sick.
Fevers	11.33	0.17	1.46	42.31	1.16	14.10	0.48
Alimentary Canal	30.22	2.42	8.02	70.85	3.97	4.06	0.15
Organs of Respiration	5.14	0.68	13.19	3.64	0.31	0.79	0.01
Other severer Disease	2.31	0.38	16.53	5.69	0.37	1.80	0.07
Total severer Disease	49.00	3.65	7.45	122.49	5.81	20.75	0.71
Milder Disease	51.05	.19	0.37	68.46	3.04	60.55	2.87
Total of all kinds	100.05	3.84	3.84	190.95	8.85	81.30	3.58

UNIVERSITY COLLEGE HOSPITAL.

ANIMAL MAGNETISM.
THIRD REPORT OF FACTS AND EXPERIMENTS.

We attended, by request, at the hospital, on Sunday afternoon, June 3rd, to witness any events that might occur in the case of Elizabeth O'Key, under the following circumstances:—During somnambulism on the previous Friday, this patient had made a statement to Mr. Wood, which that gentleman transferred to writing immediately afterwards, and having sealed the paper, placed it in the care of the matron of the hospital, with a direction on the outside, "that it might not be opened before Dr. Elliotson applied for it." The contents were not made known to us, but we understood that they related to events which, if realised, would occur between the hours of four and five o'clock on Sunday. In the ward, at half-past four, we found Dr. Elliotson, Mr. Wood, Mr. Herbert Mayo, the Rev. Mr. J——, Mr. J. Thompson, and the various patients and nurses. A friend (Mr. E. S.) accompanied us.

The girl was lying, dressed, on her bed. She had been visited by her mother and friends, and at a quarter past four had suddenly fallen asleep, as she sat at the bed foot. Pulse 108, respiration 18. We tried to wake her, by rubbing her brows, and by continued shaking, irritation, and shouting, but without success. At a quarter to five Mr. Wood with some difficulty woke her, by rubbing the eyebrows, and pressing the palms. She rose up in bed, and presented a peculiar expression of countenance,—one of fierceness and resolution. She was called by her name, and darted forward, exclaiming with great anger and sullenness, "Get away from me, you beast. D——d fool." The tone and manner were wholly new, and calculated to surprise those who had before seen her, and we now only report her disgusting and offensive ejaculations, as symptoms in the mania, which it may be important to record. "O'Key," Mr. Wood said, "what is the matter with you? What makes you so angry?"—"What the h—ll are you calling me for?" Mr. Wood offered her his hand, at which she snatched with extreme rapidity, but fortunately did not seize, advancing to the edge of the bed, whence, at another effort, she fell. She now appeared to be lame, or unable to rise. The right leg was doubled under her, and she sat on it; the left was placed with the sole of the foot on the floor; her eyes glistened with a fierceness, which was strikingly real. The rest of the features accorded. They were rigid, firmly set, and sharpened with intensity of feeling. She dragged herself along the floor with the left leg, snatching at any person who stood before her. She might be likened to an eagle, wounded in the wing, and brought to the ground, eager to tear some enemy, but imbecile from want of motive power. She appeared to observe only objects that were directly in front of her.

A piece of paper was thrown to her; she tore it into fragments with her hands and mouth. "O'Key! O'Key!" Dr. Elliotson said. "Leave me alone, you villain, do," she exclaimed, darting towards him with the ferocity of a tiger. (Her voice was full, sepulchral, and resonant, having the depth and force of a powerful adult voice.) "B——t you, get away. Come a'near me, that's all." The apothecary entered the ward, and said to her, "O'Key, what s the matter with you?"—"D—— you, get away, do," she replied, turning, by the paw-like action of her left leg, in the direction of the voice. She continued, in the intervals of darting at those who approached, to tear into the minutest portions the bits of paper that were scattered around, then venting her rage on a piece of yellow linen, which, on being thrown to her, was met with a "B——t you, what do you mean by that?"—"O'Key, don't tear it, throw it away."—*O'Key* (with tremendous voice.) "What are you doing with me? B——t you, leave me alone." Dr. Elliotson tried to "mesmerise" her. The process had no result. *Mr. Wood.* "Where's the negro, O'Key?"—*O'Key.* "You b——d fool be off." Efforts to soothe her, and "mesmerism" again tried, with a chain of persons attached to the operator, had no effect.

Mr. Wood proposed to get her out of this state by some proceeding. At twenty-eight minutes past five o'clock, Dr. Elliotson and one of the visitors each seized an arm as she sat on the floor, and Mr. Wood, from behind, placed one of his hands on her forehead, and the other on the back of her head. She did not at all approve of this, but tried to bite the parties, exclaiming, as she failed, "D——n your b——y eyes, come here. Let me only get at you."—"Who," Dr. Elliotson said, "would think that this was the gentle creature who curtsied to every one so modestly yesterday!" The sisters in the ward had never heard her before use such language, or speak with such a voice. "You monster!" she exclaimed, attempting to get a hand into her mouth. She contrived to seize a remnant of paper she still clutched, and which, grinding it with her teeth, ejaculated, "I've got you now."—*Mr. Wood.* "O'Key, will you have a knife, or a pistol?"—*O'Key.* "You d——d fool, what are you talking about?"—"What have you got between your teeth?"—"I'll let you know if I reach you."—"Is it very nice?"—"What the h—l's that to you. It's d——d tough."—"What's your name?"—"I've got no name."—"You're lucky,

then."—"Good job if you were lucky, too." Her pulse now ranged from 140 to 160. Nearly half an hour had elapsed, Mr. Wood still holding her head. She was becoming more moderate, and her voice more natural. She was asked, "Have you seen your mother to-day?" No answer. "She was here this afternoon, O'Key."—"Only call me that name again! I never saw such a d——d fool in my life."—"Shall we call you *Paper*, instead?"—"Yes."—"O'Key has been gone some years."—"A good job, too."—"Yes, for Paper's, a much better girl."—"Yes, she is."—"Would you like to see the negro?"—"No."—"But Paper's a negro. Will you stand up?" No reply. She was lifted, and stood with the left leg; the other hung with the toe towards the ground.—*Mr. Wood.* "Shall we give her the use of her leg now? We can." The spectators objected, alleging that she would fly at them. She was sat on a chair, her head still clasped. "Do you like sitting, O'Key?"—"I don't know where sitting lives."—"You are sitting now." Mr. Wood requested those who were in front to pinch her legs, to ascertain if she could feel. She flinched, as though sensible in the left, but not in the right. She was showed her left leg, and directed to pinch it, which she did, again flinching, and saying "It aint mine." She was then directed to pinch the other, but no feeling was apparent in it, and she said that "that leg was her's."

Her natural tone of voice had now returned, and she ceased to swear. "Mesmerism" again tried produced no effect. She was shown a watch. "What do you call that?" she asked. "Don't you know?"—"No, I never saw it before. I want to look at it." Her arms were freed, and she took it to examine. "What is your name?" she was asked; "is it Paper?"—"Yes; I had that name just now, hadn't I?"—"Give up the name, and be O'Key."—"No, I won't." She was shown a chair. "What is that?"—*O'Key.* "Oh, you're a fine article. I shan't tell you." Symptoms of her love of neatness now re-appeared, in the removal of some shreds of thread from her sleeves, and the arrangement of her apron. Dr. Elliotson wanted to take her hands, but she folded her arms, and desired to be left alone. Half an hour and two minutes, excepting for an interval of a minute, had now elapsed from the commencement of holding her head, when she said, with a frown, "Dear me, what's that?" dropped asleep, and was removed to bed.

Mr. Wood, who had not left the patient from the time of our entrance, now requested that the letter might be brought from the matron, to be additionally sealed, as the document was not to be read until the next afternoon. The existing seal was perfect, and it was now further sealed by the clergyman, Mr. Thompson, Mr. Mayo, and ourselves, and again returned to the matron, appointments being made to revisit the hospital at 3 o'clock.

The foregoing account was written for the press on the next morning, Monday, and in the afternoon of that day the party assembled to examine the letter. The girl was asleep in the bed, and, we were informed by the sister, had so been from the time of undressing her on the previous afternoon until now, 4 o'clock, Monday. We made every effort, by shaking and shouting, to awake her, without success. The dissipation of sleep, it seemed, depended on another person and other means,—the rubbing of the brows and chest, and pressing the palms, by Mr. Wood, and now she awoke, first in delirium, and then, on being again put to sleep, in her *natural* state. She was dressed, rose, was perfectly conscious, and walked about, evincing the same modest and respectful demeanour as had interested every spectator in her behalf in the theatre. Her shyness, indeed, prevented her from taking a meal, although fasting for twenty-four hours, while the visitors yet remained in the ward. In this state she could be put to sleep again as usual, by a pass of the hand, or simply stupified with the finger. During an experiment on the latter state she was asked if she was hungry. She "did not know." She was told to ask "the negro." Her lips moved, as though putting a question, and she replied "He says that I am hungry, but that I don't know it,"—a singular answer under the circumstances. "Ask him if you shall have such another fit again as you had yesterday?"—"He says no, but he would rather I had remained in the fit yesterday than been put to sleep again."

The letter was now inquired for, and produced. The five seals were perfect. The following were its contents, which we print with a few notes only, having reported the events to which they were presumed to relate, with every degree of precision. Copies of the letter were also taken by other persons:—

"Friday, 1st of June, 3, P.M.

"While in the state of somnambulism, she said, that from this time until the expiration of 48 hours* she should be very sleepy.† At that time she would go to sleep, and continue so for 24 hours,‡ when I might wake her in any of the ways now used, but not before.¶ That any attempt would be

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* Expiring on Sunday afternoon.

† The sister of the ward informed us on Sunday that such had been her condition for two days.

‡ Expiring on Monday afternoon.

¶ We have no means of knowing whether Mr. Wood could have awoke her before.

useless, but that I might and should produce delirium by pressing my thumbs on the palms of her hands. That this delirium, however, would entirely differ from the ordinary delirium. That she would not know me, or *any person* or thing during its continuance. That she would be very ill-tempered, cross, spiteful and mischievous, but unable to walk, and would say very bad things. That if I touch her after producing the delirium she will then recover the use of her limbs. That I might remove the delirium, and produce sleep again, by pressing one hand on her forehead and the other on the back of her head for half an hour. That I should not like to do it so long, for she would be so spiteful. That during this new state she would be sensible to pinching, and be able to hear and see. That if she gets hold of knives she will cut anybody. That at the end of 24 hours* I may awake her into her natural state by first producing sleep, but that if I do nothing the ordinary delirium which she now has will be produced."

On Thursday, June 14th, we went to the hospital and witnessed the following facts, which we describe and record precisely as they occurred. Every person who reads these narrations should have the opportunity of knowing *all* the circumstances under which they are written, to enable them to judge for themselves respecting the events to which they relate. On this rule we proceed in all our reports on animal magnetism.

The two girls O'Key, were taken into the apothecary's room, where were present Mr. Chapman (the apothecary), Mr. Wood, a pupil, and the writer of these statements, who had been informed that "magnetised" water had produced sleep on the previous evening, in Elizabeth O'Key, attended by other unanticipated phenomena. We found both of the girls in the usual vivacious condition of delirium. A small mug of water, about half full, was brought from the general tap in the ante-room, and given to her to drink. No effect followed her compliance. The finger of Mr. Chapman was then placed privately in the fluid, and again the mug was presented to her. She raised the cup to her lips, but before swallowing was complete, catalepsy was produced, the vessel remaining fixed at her lips, as though she had been turned to stone. The handle was extricated from her fingers, which still remained elevated to her mouth, and in half a minute the hand dropped, and she sank back, asleep, on the sofa upon which she was sitting. The fact that this was not an arrangement following a knowledge that the water had been "magnetised," was clearly verified to us by renewals of the experiments. Mr. Wood and the writer then proceeded to the ante-room, procured water from the same tap, and immersed, each, the point of his finger, for a second, in the fluid.

The girl was restored from sleep, and having been so often invited to drink, was not inclined again to comply; but at length, "as a favour," consented. Again, "unmagnetised" water, presented and re-presented to her, produced no phenomena. Eventually the "magnetised" cup was raised to her mouth, and catalepsy was produced, the more quickly, it was said, because *two* fingers had been placed in it. The sleep also so speedily followed, that before the mug could be seized her fingers loosened, and it fell to her lap. Part of the water was saved in it. Mr. Chapman attempted to awaken her, by various processes, but sleep persevered. Mr. Wood then employed similar means, but in vain, Mr. Chapman and Mr. Wood then simultaneously rubbed her eyebrows, still unsuccessfully. The charm, it appeared rested only in the hands of the two "magnetisers," for, on the brows being rubbed by both these parties, at the same moment, the girl awoke.

The cup was then given to Jane O'Key, but she objected to drink, because the water "was not clean," or had "had something done to it." But her scruples were overcome, it was raised to her lips, in a moment she was fixed in catalepsy, and, in a few moments more, she was caught, to prevent her sinking to the ground, as she fell into profound sleep. From this state she awoke, in about a minute, and was placed on her legs, and our attention was drawn from her, elsewhere, but on again looking round, we found her face buried in her hands, and seemingly in great distress, from both her eyes and her mouth being firmly closed,—at once blind and dumb. We attempted to remove these infirmities by pointing the hands to her eyes, in imitation of the usual mode, but she would not remain quiet, and was therefore taken to a more controlling personage. Kneeling before Mr. Chapman, that gentleman rubbed her brows, a process which Mr. Wood also afterwards employed, but in vain, and the agitation of the girl at her situation increased. It then struck us that the mug from which she had drunk contained the doubly magnetised water. We therefore "lent a hand" in conjunction with Mr. Wood, and with a rub or two on the brow, both eyes and mouth were simultaneously unlocked. Elizabeth O'Key laid on the sofa in partial somnambulism, and was, according to the movements of her lips, conferring with "her negro." Several

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Our own attempts, and those of two or three other persons to arouse her, a quarter of an hour before Mr. Wood awoke her to the furious delirium, were not, as we have already said, successful.

* Expiring on Monday afternoon.

minutes were spent at this time by the spectators in conversation, close to whom Jane O'Key stood, looking on, and amusing herself with a piece of leather. At the close of the remarks we turned to the girl, to ascertain whether she was, or would appear to be, conscious of sounds not addressed to herself. "O'Key, what have we been talking about." The girl stared. "Call her Jane," Mr. Wood said. "Jane, what have we just said." The girl asked, "Where do *Said* live?"—"We have all been talking for the last five minutes. What did you hear us say?" The girl frowned and declared that we "had not spoken a word to her." Pressing her with further inquiries she was greatly affronted. "I think you're a fool," she remarked, and walked to another part of the room. She certainly has always appeared to us to be entirely unconscious of any conversation that has passed in her presence, when not addressed immediately to her own sense of hearing. At this visit it appeared, for the first time, that slight pressure with the end of the finger, on the upper part of the back, immediately produced catalepsy. We left the sister still apparently conferring in somnambulism, and in the lobby found Dr. Elliotson surrounded by students, to whom he was about to demonstrate the influence of "magnetised" water, but having already tested this phenomenon, under critical circumstances, we did not wait to see the experiment repeated.* On this occasion we visited Ann Ross, the epileptic patient, who has not had a fit since the one mentioned at page 402, but learned that she had this morning had a tooth extracted during somnambulism, without consciousness on her part. We found that the last but one of the left lower jaw teeth had been recently removed. She declared that she did not know either that the tooth was about to be drawn, or had been drawn, until after awaking. The operation was performed by Mr. Woolridge, in consequence, the sister said, of Ross having stated on the previous evening during sleep, that *she had a much decayed tooth, which ought to be drawn.*

Dr. Elliotson observed in one of his clinical lectures on the cases of the girls O'Key (page 381), that he thought he had discovered at least one law to which the magnetic influence was reducible, namely, that the influence was greater in an experiment in proportion to the surface employed in magnetising. Thus, that where a pass made with one finger would produce partial and brief stupefaction, two would produce protracted stupor, three stupor ending in sleep, four (or the whole hand) sleep at once; and a chain of magnetisers longer sleep than one magnetiser. Also that a quick pass was more determinate in its effects than a slow one. It had become obvious, also, that the effect of a pass, whether made before the face or behind the back, was greater or less in its effects, or certain or uncertain, in proportion as the attention of the patient was more or less excited by any object of amusement which occupied the mind. Thus, two passes might occasionally be required to effect completely, on such an occasion, what *one* would otherwise accomplish. Since that time the Doctor has observed, as he believes, some additional laws. According to one of these, mucous surfaces are much more sensible to the magnetic influence than cutaneous, and this he proceeded to test, by a series of experiments, on Saturday last, June 16, in the hospital, when were present, besides the Doctor, Mr. Wood, Dr. Wilson, of the Middlesex Hospital, and the reporter of these observations. Dr. Wilson visited the hospital while the experiments were being made, to show to a friend the two remarkable patients, and remained with his friend to witness the observations.

They were commenced upon Elizabeth O'Key, who was seated on a chair in front of Dr. Elliotson, in the usual condition of harmless delirium, and poured forth, throughout the sitting, an unceasing current of humourous, witty, playful remarks. The experiments were commenced by demonstrating generally the excessive magnetic sensibility of the mucous surfaces of the eyes, the lips, and the mouth. If this excess be proved, a reason will occur to magnetisers why experiments performed within range of the patient's vision are more likely, independently of vision itself, to be "successful," than when the eyes are bandaged.

Dr. Elliotson, seated before the girl, placed his right hand close to his chin, on a level with her eyes, with the thumb and three fingers closed, the forefinger being pointed forwards. The girl was then told to look into her lap, thus covering from view nearly the whole eye. The finger was then slowly doubled into the palm, so making a "pass" before her face, at about 2½ feet from the girl. It is surprising to record that this insignificant movement should produce any effect; but we have simply to record *facts*, carefully observed, close to the operator. This insignificant movement was *followed* by a well marked event on every one of forty or fifty occasions.

The movement was attended by stupefaction, lasting for 9 seconds. She was then directed to look at the ceiling, nearly the whole eye-ball thus being exposed. The same kind of movement with the finger was followed by instant closing of the eyes, the head dropping on the shoulder as though the girl had been shot. Slight snoring attended the sleep. The finger was next placed near to the lips, and the pass was followed by stupefaction, which lasted for

* It did not "succeed." We have since heard "why."

4 seconds. Her lips being slightly separated, so as partly to expose their inner surfaces, sleep followed a similar pass, and lasted for 23 seconds. The inner surface of the *under* lip was then more exposed, and touched slightly with the finger. Instant sleep followed, lasting 41 seconds, from which twice blowing on the eyes relieved her. Touched *hard*, sleep lasted 106 seconds. The inner surfaces of *both* lips were next exposed and "magnetised," and the sleep which followed lasted for 88 seconds, 8 blowings in the face being made before she awoke. Both touched *hard*, sleep lasted 154 seconds. The tongue was extended at the operator's request, and touched with the finger; afterwards the mouth was opened wide and the finger gently inserted, for a second, and moved there once. Stupor, or sleep, followed in each of several such instances, according to the force of the touch, or the extent of mucous surface exposed to the pass. The forehead was touched, and stupor ensued; then the chin, and sleep lasted for 5 seconds. The eyelid was touched, and sleep followed, lasting for 10 seconds. The *ball* of the eye itself was touched, and sleep lasted for 35 seconds, and 12 blowings in the face were made before she awoke. It seemed difficult to regulate the degree of pressure with the finger, or else the rule laid down as to sensibility was not always absolute, for a touch as light as a feather on the tip of the tongue produced, a first time, sleep for 20 seconds; on a second time, for 30 seconds. The finger again held in the mouth for a short time, was followed by sleep, which lasted during 84 seconds. The tongue being put out, and the finger pointed towards it for 10 seconds (not touching it), the sleep lasted during 11 seconds. The tongue on this occasion did not retract into the mouth, but lost its pointed form, dropped, became bulbous in the aperture, and was fixed cataleptically until waking returned. A similar experiment was followed by 34 seconds of sleep, and it seemed to us, from some experiments following each other speedily, that the influence was increased by repetitions of one process directed to the same part.

Being apparently very tired of the experiments, the girl adopted every good-tempered manœuvre to avoid them. On one occasion, while mocking one of the party, with a grimace close to his face, she became fixed in that position, and was obliged to be aroused by blowing in the eyes. Subsequently she took the hand of one who sat close to her, and having carried it towards her face by the fingers, she was found to be self-fixed in stupor. At another time, on standing in her chair to avoid the importunities which the experiments demanded, she caught Dr. Wilson round the neck, like an infant, and on the attempt to release himself it was found that the proximity had been followed by stupefaction. On Dr. Elliotson remonstrating with her on her volatility, she called her evasions of his requests, "teaching him a lesson of patience."

The finger being pointed to the mucous membrane of both lips, stupefaction ensued more rapidly than when pointed to the obtruded tongue. Presenting the broad finger to the surface of the tongue, a greater effect was produced than when its point was directed to the tip, namely, stupefaction in two seconds, sleep in 12; sleep lasting 21 seconds.

These general demonstrations being made, the following *series* of experiments was performed:—

1. *The eyes directed downwards.*

The finger placed and moved in the manner already described, her eyes directed to her lap. *Stupefaction* (perfect silence, sedate features, the lids depressed three-fourths, the hands passive, and fixed as at the moment of seizure) ensued, lasting, respectively, in five experiments, during the subjoined periods; 10, 8, 11, 13, 19, seconds. But as it was thought that care had not been taken to keep the *times* (or slowness) of moving the finger, in each experiment, equable, the trials were recommenced, and in six observations the stupefactions lasted, respectively, during 8, 9, 11, 10, 7, 8, seconds.

The eyes directed straightforward.

The same kind of movement with the finger, in this more exposed condition of the mucous surface of the eyes, was slowly followed by sleep, lasting, in six experiments, (sometimes with heavy breathing) respectively, during 16, 18, 25, 29, 34, 32 seconds.

The eyes turned to the ceiling.

Instant sleep followed a similar pass on each of six occasions, with heavy breathing, lasting, severally, during 33, 32, 31, 39, 30, 29 seconds.

Dr. Elliotson then placed his chair behind the patient, at two yards distance, and commenced experiments against her back, as he had done in front, no attention being paid to the condition of the eyes. The chair of the girl was high-backed; its upper pannel covered her neck. The sleep following a first movement of the finger, lasted during 6 seconds; after another movement, 7 seconds; but it was observed to the operator that the *movement* of his finger seemed quicker than when he sat in front. The experiments were therefore recommenced, and the results were these, with a slow movement:—

Behind the back, neck covered.

Stupefaction lasted in six trials, respectively, 15, 14, 23, 22, 33, 32 seconds. At the last experiment, a fly pitched on her nose, and walked about. She did not disturb it until awake (on all these occasions she recovered voluntarily), and then, sensi-

ble of its movements, she brushed it off. This fact recalled to our memory a circumstance which shall be presently mentioned.

The Doctor then observed that the neck was hid from him, and he transferred her to a chair, the upper rail of which was below the scapulæ. The "results" were then these:—

Behind the back, neck exposed.

Instantaneous stupefaction lasting, in six experiments, as follows:—30, 29, 25, 34, 35, 68 seconds. In the third trial a cataleptic effect became evident, in consequence of the patient raising her arm at the moment the pass was made. The limb remained elevated while the stupor lasted. On the occasion when the stupefaction lasted 68 seconds, the hand had been raised to rub the eye, and, as was presumed, that position of the fingers protracted the stupor. Until the fingers were forced away from the head, the senses were not restored. A seventh experiment was followed by a stupor of 33 seconds.

While these trials were being made, the door was opened, and Jane O'Key appeared, While she yet had the handle in her hand. Dr. Elliotson, to prevent being disturbed, made a pass with his hand, towards her, across the room. The girl stopped in her progress, but, instead of remaining fixed, began a crescentic movement, turning the body slowly, from side to side, on the pelvis, in half-circles, in the state of stupefaction. "What was that manœuvre?"—"A new phenomenon," was the reply, "recently occurring."—"It looks as though a magnetic wind was alternately blowing in two directions on her through the door-way." Theories generally arise to account for novel events, more rapidly than correctly. The fallacy of our conjecture was rendered evident by subsequent circumstances. After three or four demi-revolutions, the fit in the door-way ceased, and the girl recovered with the customary "God bless at my soul!" entered the room, and advanced to the window, where, after the experiments on her sister were concluded, her first notable exclamation was made at her sister, who, while balancing a chair, was instantaneously fixed in catalepsy, by a pass of the hand from one of the spectators. "Look, look," she said, laughing heartily; "what a fool!" When a pass was made at Jane, while looking down, she was stupified, and the half revolutions commenced. They lasted for 29 seconds. She was directed to look at Dr. Elliotson, who made a pass with his finger, a foot from her eyes. Stupefaction, with eight demi-revolutions, lasting 70 seconds, ensued. She was then seated on a stool, and similarly stupified, her eyes having been two-thirds covered by the lids. Her body screwed round, with slight jerks, in half-circles, five in number, occupying 48 seconds. The friction on the stool prevented her from turning freely. On a second pass she made seven turns in stupefaction, occupying 52 seconds. When caused to look upwards, she made 4½ turns in 42 seconds. The finger being placed on the inner surface of her lips, she made seven turns in 75 seconds. These experiments were not conducted with care, for a long time had elapsed in the observations, and all parties had become wearied. We only record them from a desire to place before the profession *every* fact that has fallen under our observation.

The circumstance connected with the *sensibility* of Elizabeth O'Key, to which we just now referred, must be related with the following details. In the MS. copy of a former report which we supplied to the printer about three weeks ago, the following passage occurred:—

"She has 'foretold' that on the 13th of June she should go to bed in her proper senses, and wake in the morning in delirium, but possessed of sensation, and *able to feel*, which now she is not."

Subsequently we erased this sentence, preferring to await the 14th of June, before recording the truth or error of her statement. The printer will now recur to the MS., and extract that sentence, written a fortnight before the time to which it referred. We had *personal* knowledge that no evidence whatever of sensibility existed in the girl up to the 13th instant, and a gentleman who visited the hospital at 8 o'clock on the morning of the 14th, to ascertain her condition on awaking, has assured us that he found her to have become perfectly sensible to every assault on the skin which before produced no symptom of feeling; and, on the 16th of June we had ourselves personal evidence of the same fact.

EDMONTON UNION.—*To the Editor*:—Sir. The letter of "VERITAS," from Edmonton, is calculated to give a very unfair colouring to the proceedings of the meeting to which he alludes. It did not consist merely of four or five surgeons of the Union, as he states, but of nine practitioners, a sufficient number for business, and for correctly representing the views and feelings of the profession; for of upwards of eighty medical men to whom the petition resulting from that meeting was sent, only one refused to sign it, and that was your correspondent. I am, Sir, your obedient servant,

VINDEX.

Edmonton Union, June 6th, 1838,

*** If any other letters are forwarded on this subject, we will thank the writers to attach to them their names and address.—Ed. L.

De l'Albuminurie ou Hydropisie causée par Maladie des Reins, &c. Par le Dr. MARTIN SOLON, Médecin de l'Hôpital Beaujon, &c. 8vo, pp. 476. Paris, 1838.

On Dropsy caused by Disease of the Kidneys. By Dr. MARTIN SOLON.

THE pathology of the urinary organs, and especially of the kidneys, has of late, in a great measure, usurped the place long held by the thoracic viscera in the researches of clinical observers. The impulse given to the study of pulmonary diseases by the memorable discoveries of Laënnec, and the constantly increasing value those discoveries acquired, in proportion as they were better understood and appreciated, naturally long continued to direct towards them the labours of scientific and practical men. But the curiosity thus roused seems, temporarily at least, sated; and, indeed, as regards some affections of the chest, pneumonia, for example, it would perhaps be difficult to suggest new topics of inquiry, while those that have been investigated are settled on a very sure foundation. Meanwhile another field of discovery—that of renal pathology—has been opened and entered into with laudable zeal. And it is with no small satisfaction we recognise in a countryman of our own, Dr. Bright, the originator of this species of study, one of which the novelty, at the time he first laboured on it, cannot be contested. It is to his valuable papers in which the connection between albuminous urine, dropsical effusions, and certain forms of diseased kidney, was first clearly pointed out, that all subsequent productions relating to morbid states of that organ, are to be traced. One of the best and most original of these is, beyond a doubt, the volume now before us; and we very gladly seize the opportunity afforded by it of making a meritorious practitioner better known to the British public than he has hitherto been. M. Martin Solon is, indeed, particularly deserving of attention in this country, for he has for years employed the extensive opportunities his position as physician to the Hôpital Beaujon gives him, in studying that branch of the science justly esteemed among us as the most important—the *treatment* of disease.

The present work is divided into three parts. The first embraces a clear and succinct view of what has been ascertained by others respecting Bright's disease, together with some novel views of interest by the author, founded on twenty-nine original well reported cases. The second and third are devoted to some discoveries respecting the presence of albumen in the urine as a *critical sign* in acute diseases, and certain modifications of the fluids in the course of bilious affections.

We pass over the chapters in which the relative value of the various reagents for the detection of albumen, such as creosote, infusion of galls, alcohol, alum, bichloride of mercury, acids, heat, &c., are discussed, as also the cases, many of which are of much interest, independent of the renal affection, and proceed at once to the author's general description of the disease. He defines it "a special morbid state of the kidneys determining the presence of albumen in the urine, and the development of consecutive dropsies." This is correct and concise, but the new name, *albuminurie*, he proposes for it, is open to objections. The strongest of these are that, at most, the term expresses a symptom only, while it fails to distinguish those cases in which the chemical change in the urine coexists with the peculiar morbid state of the kidneys (and which alone it is meant to designate) from those numerous conditions wholly unconnected with renal disease, wherein the urine becomes albuminous. We would therefore reject the new word as a substitute for the phrase "Bright's disease," but admit it as conveniently expressing "albuminous urine," however that state of the fluid be caused. We heartily concur with M. Solon however, in his dissatisfaction at Rayer's title of *albuminous nephritis*, whereby the inflammatory nature of the lesion is assumed. A more mischievous error than this it would not be easy to hit on. Many practitioners are mainly guided in their treatment by the *name* of the disease which they have to combat;—here, then, is an authority for treating Bright's disease by antiphlogistic measures, than which none could be more injurious except at the very outset of the complaint, and employed in great moderation. Again, our author gives an instance of a brother practitioner who would not be persuaded in a particular case of the existence of the renal affection, because (guided by Rayer's *name*) he found no symptoms of *nephritis* were present. Enough has been said to show that the nomenclature of the disease is not without its importance: For our part we

prefer (until the *nature* of its anatomical character be clearly established, and a term adapted to it proposed) the good old phrase of Bright's disease, which is well understood, and assumes nothing on questions that are still *sub judice*.

M. Solon admits five forms or degrees of the lesion under consideration. The *first* of these is active hyperæmia of the organ, attended with hypertrophy, especially of the cortical substance, friability of tissue, and an appearance of stellated black and red spots resembling ecchymoses. In the *second* form the cortical substance is still hypertrophous, and presents yellow patches, traversed occasionally by whitish striæ, indicative of the original fœtal condition of the organ. There is also slight hyperæmia of the tubular substance. In the *third* degree cortical hypertrophy is still usual. The external surface is either smooth or tuberculated, and of pale yellow colour; internally the cortical substance encroaches on or penetrates the tubular, which latter is more or less affected with the same yellowish transformation as the former tissue. The kidney is now generally soft and friable, giving out on expression a whey-like fluid in some cases. The pelvis, vessels, and nerves are healthy. The *fourth* degree is characterised by the granular appearance described by Dr. Bright. This, according to M. Solon's experience, is a rare form of the disease. To the *fifth* variety he assigns all the transformations and adventitious products that the kidneys may present in Bright's disease.

Our author appears in his catenation of anatomical changes, to have fallen into a slight inconsistency as regards a previous opinion. He assumes his four last varieties to be developments of his first stage, which is none other than incipient inflammation, yet he quarrels with Rayer for calling the affection *nephritis*. Why so it is a nephritis to all intents and purposes, according to his own doctrine; it is either a pure active hyperæmia, or some one of a number of conditions produced by that hyperæmia. The truth is that though M. Solon displays a fair share of ingenuity in endeavouring to make out the transition from hyperæmia or congestion to hypertrophy, without the intervention of inflammation, he has evidently failed to convince even himself of its reality. This is clearly shown by his subsequent admission that, if the hyperæmia be not at once checked, "the kidney becomes the seat of a morbid state that partakes of the nature of inflammation" (p. 261); and again by his enumerating hyperæmia, *sub-inflammation, latent inflammation*, as the conditions preceding structural change (p. 276). For our part, if the hyperæmia be admitted as the first stage, we cannot understand how inflammation can be excluded as the second; but that the disease always commences by congestion, seems to us anything but proved. Indeed, in one of the cases (Obs. xx.) on which our author founds his doctrine of renal hyperæmia constituting the first stage of the disease, the urine had ceased to be albuminous four days *at least* before death. Is it correct, then, to ascribe that modification of its properties to the congestion of the kidneys which, as it was found at the autopsy, must have existed at the time of death?

There is nothing of much importance in the chapter on causes. M. Solon infers from the large number of cases collected by Drs. Bright, Christison, and Gregory, that this disease is more common with us than in France. Of course the cause of our rather unenviable superiority in this respect is easily made out—nor will the reader be the least surprised on learning that our author finds it in the action of those terrible destructives to which French writers uniformly attribute all the evils, physical and moral, of England,—*tea, beer*, and a *cold, damp climate!*

The symptoms are next treated of, and with great exactness, while doubtful points are carefully discussed. The remarks on the condition of the blood are well deserving of perusal. For these our limited space obliges us to refer to the original, but we cannot pass over in silence an important assertion made in this chapter. It is that the habitual presence of albumen in the urine, unattended with any other morbid condition, is a very certain premonitory symptom of Bright's disease. This notion is founded on a case observed in Rayer's wards:—

"A man was admitted to La Charité, who had neither disease nor pain in the kidneys, in fact he was perfectly free from any *unhealthy symptom whatever*; but, on examining his urine, M. Rayer found it *constantly albuminous;* subsequently dropsy supervened, and the patient died. The autopsy disclosed one of the renal lesions that produce dropsy."

We need scarcely add that this, if confirmed by further observation, must prove a most valuable guide in the early diagnosis of the disease.

The following remarks on the probable issue of the affection, are instructive :—

"The prognosis is unfavourable when the urine is colourless, of very low density, and contains a large share of albumen. It becomes more favourable when the urine froths less, regains its normal colour, and the albuminous precipitate presents a rosy tint. The latter appearance indicates the return of the uric acid. An increasing proportion of urea, greater putrescibility of the urine, and a more abundant precipitate by oxalic acid, announcing as it does the reappearance of some of the normal salts of the fluid, augur a favourable termination."—P. 255.

It is a novel feature in the history of a disease to find its prognosis almost wholly based on chemical phenomena, and it gives a pleasing foretaste of what may be hoped from the further progress of organic chemistry to know that M. Solon has not exaggerated the importance of its indications in the present case. Even a gradual disappearance of the anasarca, unless the proportion of albumen diminish at the same time, is but a fallacious sign of approaching recovery. The development of fever, diarrhœa, cephalalgia, and somnolence, announce that the fatal termination is near at hand.

In a section headed "Pathogenesis," our author enters fully into the various questions relating to the mode of formation of the disease, its nature, the connection of its symptoms with its anatomical character, &c. In alluding to those cases, distinct from Bright's disease, in which albuminous urine is found, he justly remarks that they in nowise disprove the connection that may exist between the renal lesion, and that condition of the urine. The only fact, he continues, capable of doing so would be the existence of the renal disease, well characterised, without albuminous urine. Now this has never yet been observed.

The reader will find the respective merits of venesection, diuretics, the vapour-bath, sinapisms, antimonial plasters, issues, &c., placed in a very clear point of view by M. Solon,—his statements are evidently the result of close observation and patient reflection. We regret we have only room for a few words on his employment of purgatives and alteratives. In the hydragogue effects of the former he places much confidence, and has very rarely observed their use followed by the diarrhœa so frequent under similar circumstances in this country. Resinous substances in combination, are, according to his experience, more efficacious and better borne than other cathartic preparations. The following is a formula frequently prescribed :—

℞ *Gamboge ;*
Aloes ;
Hellebore, aa. ℈i. ;
Resin of jalap, ℈i. Divide in 24 pills, of which three every second morning for a dose.

The *oleum euphorbii* also, prepared either by expression, by alcohol, or by ether, proved a valuable hydragogue in numerous cases.

As to alteratives, two circumstances seemed to contraindicate the use of the most powerful among them, — mercury. These were the assertion frequently made that it has itself the property of rendering the urine albuminous, and the very serious consequences, especially rapid and violent salivation, which followed its administration in this disease by Drs. Bright and Gregory. Experience showed our author the fallacy of the former objection; the second he fancied he should escape by employing mercurial ointment instead of calomel. His mode of prescribing it was as follows :—

℞ *Medicinal soap*, ℈i. ;
Mercurial ointment, ℈i. ;
Powdered squill, ℈i. ;
Thebaic extract, gr. iij.—vi., for 24 pills, of which the dose varies from 1 to 4 or more, in 24 hours.

This form of treatment does not by any means insure the absence of salivation, as appears from Obs. xxiii., and as might easily have been foreseen. In three only of the eight cases in which it was administered, did it prove distinctly beneficial.

We have now conducted the reader to the second part of the work, in which its author appears as an original observer. And it must be confessed that if his inquiries lead to the result he anticipates, namely, directing the attention of practitioners to the study of crises, and throwing light on the prognosis and treatment of several diseases, they are of unusual merit. We have not as yet had sufficient time to repeat his experiments, and shall therefore give, with as much brevity as possible, a simple statement of

his conclusions. It is fair to premise that the author has, to all appearance, registered with as much care those cases hostile to his doctrine as those which support it. Here, then, are his chief conclusions :—

"The urine acquires the property of becoming coagulable by heat, and precipitable by nitric acid at the period of resolution of acute diseases. To me such urine, whether coagulable or precipitable, appears *critical*.

"Coagulable critical urine contains albumen, and occasionally also partakes of the nature of the precipitable.

"Precipitable critical urine, which is of more frequent occurrence than the other species, is known by the cloud that instantly appears on the addition of an acid, especially the nitric. This cloud is soluble in an excess of acid or by heat. It seems essentially composed of urate of ammonia, modified by the morbid condition producing it.

"Precipitable critical urine cannot be confounded with ordinary turbid urine (*urine jumenteuse*), for nitric acid instead of precipitating the latter, renders it clearer than it was before its addition.

"The urine is very rarely precipitable at the outset of acute diseases. When nitric acid does act at that period the cloud is small in quantity, and signifies nothing; if it be considerable we may hope that the disease will subside before its complete development.

"Acute diseases rarely reach their period of resolution without the urine being precipitable by the acids.

"Coagulability of the urine, especially, is evident at that period alone, and ceases to exist when convalescence is fairly established."—P. 472.

These propositions will be rendered much more intelligible by consulting the following table, in which M. Solon has grouped his results :—

Diseases.	No.	Coagulability					
		Not produced by any Re agent.		Produced by Caloric.		Nitric Acid.	
		Recovered.	Died.	Recovered.	Died.	Recovered.	Died.
Intermittent Fevers	8	1	..	2	..	5	—
Measles	7	2	..	1	..	4	—
Variola.....	11	6	..	1	..	4	—
Scarlatina.....	3	1	..	1	..	1	—
Pemphigus	1	—	..	—	..	1	—
Typhoid Fevers ..	23	3	1	3	1	15	—
Bronchitis	1	—	..	—	..	1	—
Pleuropneumonia	24	2	..	2	..	17	3
Total.....	78	15	1	10	1	48	3

The only facts in this table that appear at all seriously to interfere with M. Solon's general conclusions are the large number of cases of variola cured without the appearance of a precipitate, and the occurrence of one death from typhoid fever, and of three from pneumonia, though the urine had been coagulable in the four cases. To the objection to his doctrine deducible from the former facts, he answers that there are other emunctories besides the kidneys, and that in variola especially the skin is doubtless the medium through which the critical phenomena are effected. That inferred by the latter, he combats by stating that the typhoid patient was affected with purulent splenitis at the time of death, which may have caused absorption of pus, and so introduction of albumen into the urine; and that in the pneumonic cases the precipitate was extremely slight. The reader will estimate for himself the plausibility and weight of these replies. On the whole, of the 78 cases 19 form exceptions to our author's law—15 from the want, 4 from the presence of the coagulum, the exceptions being about one-fourth.

In the third section of his volume is to be found the result of some researches on the presence of bile in the fluids, especially the urine and blood, in the course of bilious affections. If biliary matter be contained in them the addition of nitric acid produces a beautiful green precipitate. From this

fact practical inferences of value are drawn, such as, we feel assured, may guide the physician in doubtful cases.

While recommending, as we cordially do, the work of M. Solon to the attention of the profession, we are anxious to point out a circumstance in which he differs from his Parisian brethren,—he has thoroughly studied such writings of British observers as bear on his subject. The reader is no doubt aware how rarely our lively neighbours take this preliminary step, when they set out in the race for novelty, and what curious *discoveries* they are consequently in the habit of sending ever and anon across the channel to enlighten British ignorance.

THE LANCET.

London, Saturday, June 23*rd*, 1838.

A CASE which is calculated to exercise a very important influence on the practice of medicine, both in a professional and in a scientific point of view, was heard and decided on Monday the 4th of June, before the four Judges of the Court of Queen's Bench. For the following account of the case, upon which we propose to offer a few remarks, we are mainly indebted to the politeness of Mr. SMITH, solicitor for the plaintiff.

The original action was brought by Mr. MORGAN, an apothecary practising at Lichfield, against the executors of a lady named IRONMONGER, who resided at Lichfield, and *very near* to the plaintiff's house, for the recovery of a sum of £204 16s. 6d., for medicines furnished to, and attendance on, Mrs. IRONMONGER, during the years 1829 to 1834 inclusive. The bill contained a full account of medicines supplied, as by an apothecary, for which £96. 16s. 6d. were charged. The sum demanded for attendance was £108, or £18 a year for the period of six years. This latter charge was not made in a gross sum, but at the end of *each* year's bill was added the following item:—"To attendances, advice, and applications by myself and assistant, almost every day, and very frequently "many times a day, during the past year, "£18 0s. 0d." The bill did not contain a single surgical item, but was strictly an apothecary's bill for attendance and medicines furnished. On the death of Mrs. IRONMONGER the bill was delivered to her executors, who objected to the charge for *attendances*, alleging that an apothecary could charge for medicine *only*.

The defendants afterwards proposed to make Mr. MORGAN a *present* of £50, as a compensation for his attendance; but this offer was rejected by the latter, who immediately brought an action for the whole amount, and we cannot but applaud the feeling of public spirit which impelled Mr. MORGAN to reject any compromise of the matter, and bring it before a court of justice. The question involved the rights of his brethren to a great extent; it involved, moreover, the respectability of the profession to which he belonged, and any deviation from a firm, uncompromising line of conduct would have been not only a dereliction of public duty, but an act of self-degradation.

An action for the whole amount was therefore brought, and the cause was tried at the Stafford Summer Assizes in 1836, before Mr. Justice LITTLEDALE and a special jury. A verdict was given for the plaintiff for the full amount of his bill. On the following Michaelmas term the defendants applied for and obtained a rule *nisi*, to set aside this verdict for the plaintiff, and enter a verdict for themselves; this rule was granted on the principle that an apothecary has no legal right to charge for *attendance*. Thus the law, already complicated by so many interpretations, was rendered more obscure by an additional contradictory decision.

The final hearing of the cause took place, as we have already observed, on the 4th of this month, before the LORD CHIEF JUSTICE, assisted by Mr. Justice LITTLEDALE, who had already tried the case, Mr. Justice PATTESON, and Mr. Justice WILLIAMS. The Counsel for the defendants (HALLEN) argued

"that the charge for medicines in the present case was quite sufficient to afford remuneration to the plaintiff. In a former bill he had left a blank for attendances, and received a present from his patient of £20; he was therefore bound by this conduct, and had now no right to change his mode of dealing and call on the executors of the defendant to pay in a manner different from that in which payment was made by the testator. The Judge who originally tried the cause should have stated that an apothecary could not charge both for medicines and for attendance, according to the rule laid down by Lord Chief Justice Best. Were the contrary principle allowed, the apothecary would be placed in a better situation than the physician. The case before Lord Tenterden was not in contradiction to those authorities, for it was clear there that the charges for medicine had not been made with a view of paying the surgeon for his labour. But even then it is doubtful whether a surgeon-apothecary has a right to charge for attendance, for although there is no law to prevent him from making such a charge, there is an inevitable practice which must be considered as establishing the law."

The Counsel for the plaintiff had but little difficulty in answering a line of argument, the weakness of which must be sufficiently evident to our readers.

They showed that there was no law to prevent a charge for attendance as well as for medicines. The two Nisi Prius cases which appear to establish that principle are far from warranting the conclusions which have subsequently been drawn from them. In the case of Towne *v.* Lady Gresley,* Lord Chief Justice Best declared himself to be of opinion that an apothecary might charge for medicines, or attendance, but not for both. This doctrine would, at first sight, appear ot be decisive of the question at issue; but, on examining the case more closely, it seems clear that either charge made by Towne was a sufficient remuneration for his services, and that if the entire bill had been discharged he would have been paid twice over.

The circumstance of Mr. Morgan having, upon one occasion, left a blank in his bill for attendance, gave occasion to the opposite Counsel to cite the case of Tuson *v.* Batting,* in which Lord Kenyon decided that, when a surgeon leaves a blank in his bill for attendance, and the patient fills up the blank with a certain sum, the surgeon is bound by the bill, and is not entitled to recover more than the sum so paid. This case, however, was not one in point, for no blank had been left in Mr. Morgan's bills the sum of £18 having been charged in *each* year for attendance and services.

But the most important case of all is that of Handey *v.* Henson,† in which Lord Tenterden held that a surgeon-apothecary might recover the whole amount of a bill composed of charges for attendance and medicines, provided such charges were reasonable in themselves.

After having heard the arguments of Counsel on both sides, an abstract of which we have just given, the four Judges delivered their opinions seriatim, and were *unanimously* of opinion that the verdict should not be set aside; thus establishing, in *full Court*, that an apothecary has a right to charge for *attendance* as well as for medicines, even though the patient may reside next door to the medical man.

Lord Denman remarked, that the question could not be one of law, but of fact, and that the case depended upon two points; first, whether there was a contract between the parties that the plaintiff should not charge for attendances; and secondly, supposing no such contract existed, whether the charges made in the bill were, in both respects, just and reasonable.

Mr. Justice Patteson concurred in the opinion expressed by the Lord Chief Jus-

* 3 Car and Payne, 581.

* Esp. 192.

† 4 Car & Payne, 110.

TICE, and observed, that when an action is brought by an apothecary, the first question to be decided is, whether there is an *express* contract. In the absence of such contract, the plaintiff will be entitled to a fair and reasonable remuneration. There will then remain the question, whether the charges made in the bill are reasonable, and whether the charges for medicine are sufficiently high to cover a just claim for compensation. Mr. Justice LITTLEDALE and Mr. Justice WILLIAMS concurred. The question had been properly left to the Jury as one of fact, not one of law.

Thus, at length, has a common-sense decision upon medical matters been arrived at by the Judges of the land. No doubt ever existed that, in equity, an apothecary was entitled to claim for attendance as well as for medicines. The term apothecary, according to the Act of 1815, means a medical practitioner who dispenses his own medicines; his duties are, therefore, two-fold; his claims for services rest on the mental exercise required for the scientific practice of medicine, and on the material fact of his having furnished a greater or less quantity of drugs for the consumption of his patient. Through a concurrence of circumstances which we have not now the time to analyse, the latter portion of the duty of an apothecary has, of late years, been gradually becoming paramount, and the aristocracy of the medical profession, seizing greedily on every opportunity of self-aggrandisement, have therefore endeavoured to inculcate the notion that the apothecary was little better than a tradesman,—one who might claim a recompense for goods delivered, but who had no right, either in law or by custom, to charge, as the members of a liberal profession are wont to do, for the exercise of mental qualities. It is unnecessary for us to point out the inconveniences which attach to the custom of merely sending in medicines to a patient, and charging according to the quantity of drugs delivered or consumed. We know that a large majority of the profession feel the extent of these inconveniences, from which they have hitherto been unable to escape, through the idea that a charge for medicine was the only one which an apothecary was legally empowered to make; but a solemn verdict, sanctioned by the assembled Judges of the land, has now established the right of apothecaries to rank with the members of other liberal professions. We trust that henceforward they will seize every opportunity of exercising a right which Mr. MORGAN has vindicated with so much public spirit and such complete success.

INSANITY OF THE KENT MURDERERS.

To the Editor of THE LANCET.

SIR:—May I request the favour of an immediate insertion of the accompanying most important letter in THE LANCET. Its suggestions are of such intense and urgent interest at this moment, that I would further request that a copy might be forwarded to the learned Judge and Queen's Counsel, whose office it may be to preside and officiate on the trial of the unfortunate men to whom it specially alludes. I am, Sir, your obedient servant,

MARSHALL HALL.

14, Manchester-square, June 19, 1838.

Herne-bay, June 17th, 1838.

My Dear Sir:—The calamitous events which have recently disgraced this part of the county of Kent, have called my attention (though not for the first time) to an important fact in the department of medical jurisprudence, which ought, I am sure, to be made public without delay, as it may tend to save the lives or liberty of several unfortunate men. The fact to which I allude is this,—that there is a species of insanity of a *contagious* nature, and of a *temporary* duration, totally unconnected with diseased structure, but yet evidently consisting in a suspension of the healthy action of the intellectual function of the cerebrum, a disease which will certainly yield to circumstances, and which ought not, on any pretence, to become the subject of judicial retribution. I have seen many such cases; they are closely allied to the contagious hysteria of hospitals, and are chiefly, but not wholly, confined to the female sex. They are commonly connected with extravagant notions of religion. I should not hesitate to say that the late Rev. Mr. Irving and nearly all his followers, were the subjects of monomania of a contagious nature. But I need not multiply instances; your

own experience will provide you with many cases. What I wish now particularly to urge is, that those poor deluded men, who are about to be tried for murder, are, in fact, now as harmless and as innocent as any of her Majesty's subjects, and as their leader was once pardoned for perjury, being insane, so, *a fortiori*, these poor fellows ought to be pardoned on the same ground. He might have been a desperate impostor, *they*, to believe his lies, *must* have been temporarily insane.* The cause of their insanity being removed the effect has ceased. Out of about 1500 individuals in the neighbourhood, who believed in his pretensions, not one, I believe, remains deluded *now*. That they caught the disease of him, as the small-pox and typhus fever are sometimes supposed to be caught, through the medium of the nervous system, I cannot entertain a doubt.

Whether this subject lies within the sphere of your investigations on the nervous system, I cannot tell; but I do think it ought to be brought before the public by some *name* which will command notice, and I am sure you will excuse my troubling you with the suggestion. I am, my dear Sir, yours faithfully,

THOMAS HUNT.

Dr. Marshall Hall.

ANIMAL MAGNETISM.

To the Editor of THE LANCET.

SIR:—Permit me to make a communication through the medium of your valuable periodical, that may be found interesting to some of your philosophical readers in particular, and to my professional brethren in general.

The shortest way in which I can convey the facts is, perhaps, by giving an extract from my case-book, which I now adopt:—

June 13. This day I mesmerised my patient, Miss S. M——, in the presence of Mr. Fowler, a surgeon of this town, and my second son, and the manner of operating was as follows:—The patient was seated in my study, her face towards the door. Over an opening pierced through the door the object-glass of an achromatic telescope, 1¼ inch in diameter, was placed, and the refracted rays were received upon a looking-glass placed at the focal distance of the lens outside the closed door. A second glass received the reflected rays of the first, and I took my station in my drawing-room, at a distance of 46 feet from my patient. I then made the usual passes downwards, crossing the pencil of reflected rays, and in 3½ minutes the patient fell into somnolency. This fact was instantly announced to us by the sister of the patient opening my study door, by which means the patient's whole figure was seen, being now reflected in the second glass; on returning she was found to be in the usual state of magnetic coma.

15. Mesmerised the patient this day by refraction through the lens, and one reflection from a small piece of looking-glass, 1½ inch square; she fell into somnolency in 3½ minutes.

I must here mention that I was induced to make these experiments by certain ideas, which were instantly formed upon seeing Dr. Elliotson mesmerise a patient, by making passes in front of her reflected image, in a glass which he held in his hand, on Wednesday, the 6th instant, in the hospital of the London University College. The Doctor, whom I have the honour to call my friend, indulged my request by repeating the experiment with two glasses, whereupon I could not but consider that there was such a principle as a magnetic fluid; that being invisible it was similar to that of caloric; and that as it was capable of being reflected, so it was subject, in all probability, to those laws of caloric that relate to its double and single refraction and polarisation.

The two experiments I have now detailed to you were made upon these ideas as a basis; and so soon as I can get apparatus adapted to the purpose of carrying out my ideas as to the double refraction and polarisation, I doubt not but that I shall succeed in these in like manner as in those proving the refractibility of this fluid.

The second experiment now detailed, in which my reflector was so small, was made in consequence of certain doubts that arose in my mind as to whether I had operated in the first experiment upon the reflection of the focal rays only of the lens, or had, in reality, acted upon all the rays that might have been reflected from the first glass used, which contained a superficies equal to 14¼ inches by 19½ inches.

My doubts were formed from considering the facts of two experiments previously made, and which I beg leave now to detail, by making another extract from my case-book,—they were as follows:—

June 29. This day I mesmerised the patient, seated in a large high-backed and stuffed chair, in the dining-room, while I took my station in the hall. We were separated by a brick-built partition wall, and a distance of seven feet, the back of the patient was towards this wall. She fell into somnolency in three minutes after I had made the usual passes.

30. Mesmerised the patient this day, in presence of Mr. Brommet, surgeon to the Life Guards, and Mr. Fowler, who has been mentioned before.

The patient was seated in the dining-

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* The verdict on the Coroner's inquest should have been "Temporary Insanity," not "Wilful Murder."

room, while I made the usual passes in the drawing-room, the folding doors between these rooms being closed, and the distance of the patient being 25 feet; she fell into somnolency in three minutes.

Therefore as this fluid, or principle, magnetic, or by whatsoever name designated, penetrates wooden doors and brick walls, and probably, like caloric, all substances, I considered that my first experiment was not sufficiently conclusive of the fact of its refractibility, but that all the rays that had passed through the door, as well as through the lens, and had been reflected to me by the first glass, had been equally acted upon. The second experiment clears away this doubt, and I made my passes with the extremities of my fingers, and in a space of three or four inches only, so that very little more space was passed over than the pencil of rays reflected to me by a piece of defectively silvered and common window-glass might be supposed to occupy.

Any gentleman can repeat those experiments with any patient with whom he is in perfect *rapport*, to use the expression of the French school, that is to say, with any patient upon whom he is enabled to produce magnetic coma in two or three minutes, by the ordinary manipulations. I am also aware that this magnetic fluid cannot be reflected by all surfaces, and the practice of many magnetisers on the Continent shows it is capable of being absorbed by some, and radiated from other surfaces, and my experiments prove that the atmosphere opposes no obstacle to its free passage from one object to another.

I could have written much more upon the various principles which my experiments evidently tend to establish, but I must not trifle with your time by reciting those things which any reflecting mind can supply. I am, Sir, with great respect, your most obedient servant,

JAMES BIRCH SHARPE, M.R.C.S.

Windsor, June 16, 1838.

VACCINATION.

To the Editor of THE LANCET.

SIR:—In this day's number of your publication you have inserted a statement of a case of "small-pox and vaccination at the same time" from Mr. Henry Wilkin, of Walton; and, for my part, I am at a loss to understand to what particular point he is desirous of directing the attention of your readers. If to the circumstance of the small-pox simultaneously progressing with, and being modified by, the cow-pox, I apprehend the fact is familiar enough to every intelligent and observant medical practitioner, if not to Mr. Wilkin; but if to the vaccination of Julia Gladwell, his description of the appearances of the disease, and his corollary that "it appeared quite perfect, having gone through its usual course." I do not think his communication ought to pass unnoticed.

Mr. Wilkin says, that on the 10th of May he vaccinated the child, that on the 14th of May "the vaccinated arm had taken remarkably well, a distinct areola had formed around the pock, and on the 17th of May it had gone through its usual course."

Now, Sir, I have never seen any but spurious vaccine vesicles present a distinct areola earlier than the eighth day, and it should be borne in mind, too, that the areola of a spurious vesicle is either of *a pale-red or dark-rose colour*, that the vesicle has a sharp angulated edge, a flattened top, and is smaller than the genuine one, which is of a circular form with its surface uneven, its centre depressed and surrounded by an areola of an *intense red colour*.

If this be correct, one of two deductions is inevitable; either that Mr. Wilkin has mistaken a spurious for a genuine vaccine vesicle, or has misstated the appearances of it; it is, however, of the greatest importance to his patients that a medical man should learn to distinguish these different forms of the disease, because the one does not give security against the small-pox, and the other, in almost all cases, either prevents or modifies it.

Mr. Wilkin states that "several children in the same house were at that time suffering most severely with the confluent form of small-pox," but he does not say whether they had been vaccinated, and whether the disease had also gone through "its usual course" in them as in Julia Gladwell.

I am sorry, Mr. Editor, to be compelled to give it as my opinion that sufficient attention is not paid by some medical practitioners to vaccination, and that the cases of malignant small-pox which occur after vaccination could almost always be traced to the imperfect effect of that operation on the system, sometimes arising from the lymph not being taken at the proper stage of the eruption; sometimes from too many being inoculated from the same vesicle; sometimes from only one puncture being made and the system being but very imperfectly saturated with it, sometimes from the patient's labouring under some cutaneous disease, and sometimes, I fear, from the spurious vesicle surrounded by an areola, being mistaken for the true and genuine form of the disease.

I am, Sir, your obedient servant,

T. ABRAHAM, M.R.C.S.L.

49, Old Broad-street,
June 9th, 1838.

MIDDLESEX HOSPITAL.

On Tuesday last were assembled, at Middlesex Hospital, about 40 Governors, forming a special board, which was summoned to consider the subject of a letter addressed to the Weekly Board by the Apothecary, a gentleman of nearly seven years' appointment in the Hospital, one of no common order of talent, and pronounced, by several medical gentlemen present, to be "one of the most devoted, faithful, active officers that ever belonged to the Middlesex, or any other Institution." It seems that, for one or two years past, the drug bills of the establishment were considered high, and no reason was publicly assigned for the same. This charge, along with several minor ones, was brought against the Apothecary in return for a complaint made by him, about three months ago, of irregular and vexatious applications at unseasonable hours, for medicines by the midwifery pupils studying under Mr. Sweatman, of Berners-street, now by a German diploma, made, "Dr. Sweatman." The Apothecary having had no opportunity for public vindication of his conduct, addressed the letter above-mentioned to the Board, wherein he stated, that he had no animosity to a soul breathing; but that, in self-vindication, it was his duty to state, that certain officers of the Institution, (certainly not the physicians) had been, and and were, in the habit of giving cards to persons for medicines from the Hospital Dispensary without any Governor's names, or letters being attached thereto. That perhaps 500 persons were thus thrown upon the support of the charity illegally, yearly. That some, falsely called, "in-patients," were thus intruded upon the charity; were fed with meat, porter, wine, gin, brandy, &c., in full ratio, daily; were supplied with expensive medicines, as quinine, sarsaparilla morphia, &c. &c., at the Hospital charge; some of them died, and, in addition, were even buried, at the expense of the charity, and not a single authority or Governor's name could be traced for the sanction of this burthen; that in consequence the hospital bills were high, and the returns of lawful recognised patients disproportionately low; that since he had lately required an order from the Board to refuse these illegal cards, he had done so, and that still they were presented and given; that he had come in collision, last week, with the surgeon, who demanded back an illegal card, which he had detained; and that having respectfully, but firmly, declined giving the medicines required, he had been thrown into the painful dilemma of either displeasing his superior officers, or of disobeying the order of the Board, &c.

This letter, respectfully written, full of dates, figures, and proofs of the genera statements made, was debated on with no common warmth and zeal on one side, and clamour and severity on the other. Finally, the Governors divided, sixteen on one side, seventeen on the other; for the majority decided on the act of suspending the Apothecary for one week. This valuable, upright, and indefatigable officer was, therefore, called in, and with a speech from the chair, was told he was to be suspended from office till that day week, till another Board should decide on his case! The Apothecary firmly, but respectfully, asked this simple question when, the speech from the chair was ended. "May I know, Sir, what crime I have committed, and wherefore I am to be thus punished?" Great cheering followed this question. The Chairman, in some embarrassment, attempted a few words, and said that the Secretary should be ordered to make out the charge. Upon this the Apothecary added, "I can only declare, Sir, before God and man, that I have a clear conscience in this business. I have done all my duties, to the utmost of my power, and I now court, and ask for the fullest, and most minute investigation into my conduct, ever since I have been in this place." With this the Apothecary withdrew, and the Apothecary's Assistant being called in, was invested with authority to act in his place, and the Apothecary was left to the mortification of seeing himself thus degraded, after nearly seven years of active, zealous, indefatigable exertion; and after having, by his economy and good management, saved the Hospital in various items nearly a hundred a year.

But the most severe judgment, is not the remedy for the disease of the "*illegal cards*," affair. The 1200 Governors of Middlesex Hospital ought to look into this matter a little, and not remain at home leaving this valuable Institution in the hands of a "medical clique," a small band, to manage it, now that Mr. Rawlinson, the Magistrate, and the worthy Sir Charles Bell have left it, at their pleasure. Let the Governors come forward and look into every department, and see how each is conducted, and the Secretary's, (the office of house-steward is also joined to his), the matrons, the nurses, &c. &c. Let all the books be looked into, and narrowly examined; and by ocular demonstration, let it be seen which department is conducted with most regularity and correctness; let justice be done to all parties, and let the blame be given to the guilty, whether he be the lowest menial of the place, or the senior in rank, age, or profession.

A Friend to Truth and an Enemy to Oppression.

London, June 13, 1838.

*** Since the above letter was received we perceive, by an advertisement in a daily paper, that the Apothecary has been restored to office.—Ed. L.

MEDICAL SOCIETY OF LONDON.

Monday, May 28th, 1838.

Mr. Bryant, President.

OBJECTIONS TO DR. ELLIOTSON'S EXPERIMENTS ON ELIZABETH O'KEY.—DISCUSSION ON ANIMAL MAGNETISM.—ITS CURATIVE EFFECTS.

Dr. Burne introduced this subject by stating, that he had twice visited University College Hospital, to see Dr. Elliotson's experiments. On the second occasion he took copious notes of what transpired, and these he would read to the Society. They related to experiments performed on the 27th of April. The subject of them was apparently about fourteen years of age, diminutive, and very pale, with black eyes, and puckered brow. The eyebrows so far overhung the eyeballs as to prevent a person having a full view of her eyes.* It is unnecessary to follow Dr. Burne through his copious account of the experiments, but shall state the grounds on which he has formed his opinions. In the first place, when the girl was sent to sleep, Dr. Burne observed that, just before she went off, after Dr. Elliotson had pointed his hand two or three inches from the back of her head, he said, "Watch the girl's countenance," when she immediately fell back; he considered that when she was likely to be hurt by a fall, she went to sleep in a much easier manner, so as not to subject herself to injury. Again, the manipulations being made with a closed door intervening between the operator and the patient, the *expected* results did not take place, but she invariably fell asleep without their occurring. When the motions were made "within the range of her vision," the expected results took place. Dr. Elliotson made many motions that she imitated, in front of her, and when, behind her, he opened his mouth, he snapped his teeth so loudly that the noise could be distinctly heard at the distance of several feet.† It was said, on one occasion, when the manipulations failed, that "the girl was too excited," while a single pass, afterwards, threw her sister into slumber, although she was remarkably excitable. In short, Dr. Burne considered the girl was an impostor, on the following grounds:—

1. That Dr. Elliotson in several instances, in the girl's presence, announced what was to be expected.

2. That the girl fell violently back in the chair, when in the middle of the area; but when the chair was removed to within a few inches of some closed doors, she fell quietly back, on three occasions, to within an inch of the doors.

3. On the two occasions when Dr. B. witnessed the experiments, during the delirium, the jokes were the same on each occasion, and it appeared to him as if there was "method" in the delirium. There was nothing inappropriate or indelicate in her manner or observations. She went straight forward to persons who were present, and spoke to them at once.

4. That when the experiments were made within "the range of her vision," the expected results took place. When made out of that range, the effects were uncertain and were longer in taking place, or were opposite to what was expected.

5. No effects took place, or they were very irregular, when the operator was on the other side of the doors.

Lastly. He considered that the girl was deceiving Dr. Elliotson, who, he was convinced, was perfectly sincere in his belief of the truth of the *facts*. There was nothing in the experiments which he saw, but what any patient or person could accomplish, and no uniformity in the results, excepting when Dr. Elliotson had announced in her presence what was to be expected, or when she saw the manipulations. Dr. Burne concluded by regretting that a Committee had not been formed for the purpose of inquiring into the alleged phenomena of animal magnetism.

Dr. T. Thomson, at the request of a member, stated a few particulars of the previous history of the two girls O'Key, who had been under his care before their admission into the Hospital. (For these see The Lancet of June 9th.)

Dr. Bennett said he had seen Dr. Elliotson perform some experiments on O'Key, and considered that the motions were *not* made within the range of her vision. Some changes, indeed, occurred which it was quite evident it was out of the girl's voluntary power to produce. Before she was sent to sleep the skin was cold and clammy, and the pulse small and rapid; and on awaking, in a minute or two, the temperature of the skin was increased most decidedly, and the pulse was fuller and not so rapid.

Dr. L. Stewart had seen experiments performed on twelve or fourteen persons, and had drawn the following conclusions:—First, that there was so much in the idio-

* Dr. Burne does not appear to us to be very accurate here. The girl is 17, her eyes are decidedly not even verging on *black*, and so little of *overhanging* of the brows is there, that no eyes, we think, can be better watched. The puckering of the brows is not downward, when it occurs.—Rep. L.

† We feel bound to say, that, on occasions when we had ourselves the opportunity of witnessing similar experiments, not the slightest noise of this kind was made, though some things are said and done in her presence from which, were she conscious of them, evidence in favour of animal magnetism could not, of course, be drawn.—Rep. L.

syncrasy of the patient, that it was to be greatly doubted if the magnetiser was an agent in the affair; in fact, that the effect would be spontaneous in the patient; or, if otherwise, that the magnetism only acted by calling into existence the idiosyncrasy of the patient. Some effects were observed, which, whatever they were called, could not be simulated; but in certain particulars he had observed a sort of acting in O'Key and Lucy Clarke, as if they were attempting to do things which they could not accomplish.

Dr. WHITING said that animal magnetism was not a thing to be slighted. It was due to Dr. Elliotson to consider that his experiments were strictly *experiments*, and not *demonstrations*, instituted with a view to determine the powers of animal magnetism. He (Dr. W.) quite believed that the manipulations possessed some power over the animal frame, though he did not mean to say that anything passed between the operator and the patient, or that the influence was exerted through the medium of the senses. A peculiar idiosyncrasy might be necessary. Every person was not, probably, susceptible to the influence. He believed that the mind had much to do with the matter; there might be something in addition to that, but he thought that the mind "set it a going." A clergyman whom he knew had thirty years since received instructions in animal magnetism, from a French refugee. One day, subsequently, he was sitting with a lady, who was suffering from a violent toothach, which he thought he could cure; he employed his hand in the usual manner, and in a very short time she exclaimed, "I can't open my eyes," the eyelids having fallen. The gentleman became alarmed, and sent for a physician; but, in the mean time, having rubbed the eyebrows, the patient awoke. This gentleman proceeded with his experiments, and produced all the ordinary effects of animal magnetism, which he noted, day by day, and verified by the signatures of many witnesses. He (Dr. W.) had read this most interesting document, respecting the veracity of which there could be no suspicion, and it had so much effect on him, that he determined never publicly to oppose animal magnetism. At first, when the clergyman called on him, he said, in order to stop the conversation, that he had not time to talk on the subject; but at the second call, the written document had made a great impression on him, and on seeing the experiments of M. Dupotet, the effects produced were so like those detailed in the clergyman's account, that he was convinced of their importance. Still, he believed that idiosyncrasy played an essential part in the phenomena. Regarding the effects, he had the other day met a surgeon in Camberwell, with whom he had lately attended a patient, respecting whom he was informed that Mesmerism had produced remarkable results, which he went with the surgeon to witness. At first the passes produced excitement like hysteria, and the patient requested that they might not be made, as she disliked them; but they were continued, and she shortly fell asleep, lying on one side, and breathing in a manner not at all like the respiration of natural sleep. She soon awoke, perfectly furious, wishing to get out of bed, and to run, almost naked, into the street. She was held still, the manipulations were again had recourse to, she again fell asleep, the sleep continued for ten minutes, and then she awoke perfectly rational.

Dr. SHEARMAN asked why animal magnetism was not brought into action on the human body before now? He considered that the imagination had a great deal to do with the matter. The French Academy had rejected it.

Mr. KINGDON inquired into the *cui bono* of the science. Had it cured any diseases? It should be carefully investigated.

Mr. CLIFTON considered the subject to be a delusion, which was unworthy of discussion. There was nothing tangible in it.

Mr. DENDY, in allusion to Dr. Shearman's observations, said that the second Commission in France, including Lavoisier and Franklin, had not altogether rejected the subject; Franklin had a conviction that there was something extraordinary in it. As to the *cui bono*, the manipulations reduced the system to somnambulism, and there was the *cui bono*. He had seen that O'Key was made perfectly insensible. He believed that a peculiar idiosyncrasy was necessary for the production of its influence. There was undoubtedly something in the manipulations, though animal magnetism attempted, he thought, to prove too much.

The Society then adjourned, after a brief address from the President, to the last Monday in September next.

ERRATUM.—In the case alluded to in a former report of the Society, related by Mr Dendy, the patient did not void the egg-cup by stool, but perished with symptoms of strangulated hernia.

UNIVERSITY COLLEGE HOSPITAL.

CASES IN WHICH MESMERISM WAS EMPLOYED AS A MEANS OF CURE OF DISEASE.

WILLIAM KEBBELL, aged 12, was admitted March 13. Complexion florid, apparently of a sanguineous temperament; no hereditary predisposition. When an infant, had several fits from teething, which, however, ceased when he had cut all his teeth. Six years ago, without any obvious cause, either mechanical injury or mental emotion, he was

suddenly attacked with a sensation of choking in the throat, and slight convulsions, without insensibility or foaming at the mouth. These symptoms soon ceased, but frequently returned afterwards. Some time after the commencement of the fits he had the measles, but has since enjoyed tolerably good health, with the exception of the fits. The surgeon who attended him supposed he had worms, and ordered him medicines with the view of removing them, but without effect. The fits, according to his mother's statement, are always worse at the full and change of the moon, and have lately returned with great frequency. The fit assumes the following character:—He has a sensation of something rising in his throat; he appears to be choked, and his face becomes turgid; he then becomes comatose, sleeps for about five minutes, and then returns to his usual health.

This patient was submitted to the mesmeric process, which appeared to have but a very slight effect upon him. He remained in the hospital until the 26th of April, at which date, the fits having been uninfluenced by the treatment, he was allowed to go home for a few weeks. On no occasion did the mesmeric process produce decided effect.

Case 2.—William Leeds, aged 11, of florid complexion, and sanguineous temperament, was admitted March 28. His parents are both living, and are not aware that any of their family have been subject to fits. The patient always enjoyed good health until May last (twelvemonths), when he had an epileptic fit. On that occasion he fell suddenly down, his countenance grew livid, and he remained some time perfectly insensible. For three months subsequently these fits returned almost daily, and frequently three or four times a day. At the end of three months they ceased, and he remained perfectly free from them until two months ago, when they again attacked him, and have since returned almost daily. On these occasions he suddenly falls, becomes perfectly insensible, and continues so, generally for an hour, but sometimes longer, his hands and feet being spasmodically affected during these attacks; his health has been generally good until lately, and his sleep is now frequently disturbed. When young was a good deal troubled with ascarides, but none have, of late, been observed. He is not aware of any cause that could have induced the epilepsy.

April 1. Has been mesmerised daily for half an hour since his admission. The first time a decided effect was produced, he soon became affected with tremors of his eyelids, and at length became slightly comatose; these effects, however, quickly went off spontaneously. Has had no fit since his admission.

22. To-day, being anxious to go home, his father took him away. He has had no fit since the performance of Mesmerism the day after admission. The effect of the Mesmerism gradually increased in intensity daily, after each operation, during the first fortnight, the extent of its effects seemed to be then obtained, the *magnetic sleep* being induced.

VESICO-VAGINAL FISTULA.

In lecturing on a case of vesico-vaginal fistula, which presented itself for admission, Mr. Liston said, that the disease was occasionally the result of injury inflicted on the parts, by the use of instruments in assisting delivery, or it might arise from the effects produced by the pressure of the head of the child, if it were allowed to remain too long in the passages. The communication between the vagina and bladder might be at once made, as was more frequently the case from the former cause, and was ascertained to have occurred by the flow of urine through the wound, or it might not take place until the lapse of several days, as was generally the case from the second cause, and then the flow of the urine succeeded to inflammation and slough of the injured part, the substance which came away being compared to wetted leather. When the mischief had been done, the remedying of it was exceedingly difficult, and in some instances, indeed, impossible; occasionally the mischief extended not only to the vagina and bladder, but also involved the rectum, the fæces and urine passing through one common opening. Various means of cure had been recommended, the chief of these consisted in the application of the actual cautery, and the closing of the wound, its edges being pared by means of sutures. He had succeeded in curing four or five cases of vesico-vaginal fistula by the application of the actual cautery. Paring the edges of the wound, and afterwards applying sutures, was not easily effected. By placing the woman on her hands and knees, and using the speculum, a view of the extent of the injury was easily taken; the edges of the wound were then to be seized with a pair of hooked forceps, and pared with a common knife; the sutures might then be passed, and, perhaps, more readily than otherwise, by an ingenious instrument invented by Mr. Beaumont for the purpose. The body must be kept in such a position as to prevent, as much as possible, the flowing of the urine through the wound. But when all this was effected, everything was opposed to the process of union; the parietes of the vagina and bladder were very thin, these being two secreting surfaces, with very little interposed substance, and there was a constant distillation of an acrid fluid through the edges of the wound; it was seldom that union took place. All, indeed, might appear to go on well for eight or ten days; but at the expiration of

that time the wound would probably be found to have been enlarged, by having been interfered with, and would become larger and larger every time the attempt at cure was made. If the communication was very small, so as to admit, perhaps, the point of a sound, the application of the actual cautery to the part might, most likely, be successful. The situation of the opening was to be ascertained by means of the speculum, and the end of a sound, red hot, was to be applied to the part; a granulating process was thus set up, and contraction was likely to follow during the cicatrisation. This operation, performed at intervals of a month or two, he had found effect a cure. It was advisable to keep the patient prone, divide a portion of the sphincter muscle, and keep a large tube in the urethra, in order that the urine might flow without any effort on the part of the patient.

STATE OF MEDICINE IN SPAIN.

We have recently published several letters on the state of medicine in Spain, from which it would appear that the art of healing has not made the same progress in that country which it has in several other of the European states. The strictures of some of our correspondents have been, we are inclined to think, more severe than just; for, if the following account of the mode of clinical instruction pursued at the Royal College of Barcelona be correct, the principles upon which the medical teachers of the Spanish schools act are much more sound and comprehensive than those which we have so frequently been compelled to condemn in our own country.

Dr. Felix Janer, Professor of Clinical Surgery at the Hospital of Barcelona, has for the last ten years adopted a method of instruction than which none other presents the same advantages. M. Janer has been long convinced of the necessity of compelling the students to study and meditate on the cases which they observe in hospital, and for this purpose he has arranged his wards in such a manner that each student has the charge and treatment of a certain number of patients.

The students, on whom this favour is conferred are students of the sixth and seventh years; the rest not having as yet attained sufficient knowledge, are spectators, until such time as the Professor may think them capable of directing the treatment of some ordinary disease.

In order to avoid all appearance of partiality the patients are divided into classes, according to the number of pupils, and at the end of each list is appended the name of the student appointed to take charge of them. When a new patient is admitted the student on duty is immediately informed of it, and expected to examine the patient minutely before the arrival of the Professor, who, in turn, questions him before all the pupils, touching the nature of the disease, the symptoms present, the treatment which he proposes to adopt, &c., and corrects any errors into which he may have fallen. When the visit is over the different clinical students, the pupils, and the Professor of Surgery assemble in the amphitheatre, and each student, in his turn, gives a short history of the case or cases confided to his care, establishes his diagnosis, and explains the treatment. The Professor then delivers a lecture in which he comments upon what has been said, points out the omissions or errors of the student, and makes some general clinical observations on the cases contained in the hospital.

In addition to this clinical exercise, which is repeated every day, the student is obliged to keep an exact account of the cases placed under his care, which the Professor examines every alternate day, correcting the errors, and adding such remarks of a practical nature as are suggested by the nature period, or peculiarities of the disease.

During the last two or three months of the season the pupils of the sixth year become strictly observers, while those of the seventh year act as consulting physicians; the most interesting or difficult cases are selected, and a discussion is held before the assembled pupils, and under the superintendance of the Professor and Assistant-Surgeons.

The bodies of all patients dying in the hospital are examined with great care in presence of all the pupils, and, in a book kept for the purpose, an exact account of the post-mortem appearance is registered.

The Assistant-Surgeon, in addition to his other duties, has to draw up a *compte rendu* every three months of the hospital, interspersed with remarks on the most interesting cases.—*Journ. des Con. Med. Chir.*, June, 1838.

TREATMENT OF ANTHRAX WITHOUT INCISION.

M. Dupuytren, amongst many other improvements of the art of surgery, introduced the practice of dividing anthrax by a crucial incision, from the apex to the base, and thus preventing the strangulation which terminates in gangrene, and constitutes the most dangerous point of the malady. This practice is very generally adopted by surgeons of the present day; but M. Marini has conceived, and proved by experiment, that cases of anthrax may also be cured by acting powerfully on the constitution of the

affected individual. The following case we select as an example:—

A., aged 43 years, of powerful constitution and sanguineous temperament, has generally enjoyed good health, when, in the month of May, after having experienced some domestic troubles, and moreover been exposed to alternations of heat and cold, he was seized with a burning pain over the right scapular region. On the following morning an anthrax declared itself in this point, and extending with remarkable rapidity, soon covered the whole scapula.

M. Castillani prescribed a copious venesection; 20 leeches to the tumour, and Frank's powders * internally; poultices moistened with Goulard water, &c. This treatment was persisted in for a week; on the eighth day suppuration set in at the centre of the tumour, and an eschar soon formed; the latter was cautiously excised, when a quantity of pus came away; the sore now threw up granulations and contracted gradually; a nourishing diet, with mild tonics was administered, and the patient was discharged well on the forty-fifth day.

M. Marini relates six or eight other cases, which are equally conclusive. In one, the anthrax occupied the inner side of the thigh, and was attended with severe re-action; in another it was situate over the sacro-iliac region; in others, it occupied the back, neck, or loins. All these cases were treated and cured without incision.— *French Lancet*, May, 1838.

HOOPING-COUGH.

At a period when hooping-cough prevails very generally, the following remarks, by M. Lombard of Geneva, may be read with interest:—

M. Lombard conceives that he has discovered a never-failing sign of the decline of the disease, which is marked by a much greater frequency of accesses during the day than during the night, while, on the contrary, before the malady has reached its height, the fits of coughing are more frequent during the night.

The experience of M. Lombard, also, confirms a proposition which has been already established by previous researches, viz, that the danger of the disease is in the inverse ratio of the age of the patient. Of 40 children, who died during an epidemic attack of hooping-cough, under M. Lombard's care, two-thirds were under two years of age; the others ranged between the ages of two and four years. After six years he did not lose a single child.*

Finally, M. Lombard speaks highly in recommendation of the subcarbonate of iron as a means of diminishing the violence and number of the fits of coughing. From 24 to 36 grains a day were administered to the little patient, with the best effects.—*French Lancet*, June 9th.

* These powders are composed of tartar-emetic, 1 gr.; cream of tartar ½ oz.; divide into 6 papers, one every hour.

* The latter observation must not be taken too literally. We have seen numbers of children lost by the effects of hooping-cough after the age of 9, 10, and 12.—Ed. L.

CASE OF

FISTULA CURED BY COFFEE.

By M. Antony, *M. D.*

J. S. C., aged about 40, of medium statue, black hair and eyes, round make, and active in body and mind, between three and four years ago became afflicted with hæmorrhoidal tumours. The swellings were soon very painful, and were chiefly within the sphincter ani; soon however, tumours arose as usual around the verge of the anus. The swellings were never as large as they are in many cases, but were so painful that on the failure of other ordinary applications, he was compelled to resort to warm bathing of the part almost incessantly for keeping the extreme pain in moderation for the present. The symptoms, after being palliated for a while, readily returned on taking cold, or on any cause of the slighest morbid excitement occurring. After a few months, an aching induration was observed, extending, along the cellular substance on the right side of the anus, in the direction of the ischiatic tuberosity, to the extent of about one inch; at the outward extremity of which there appeared, in the superficial integuments, a little pimple, which finally opened, and discharged a small quantity of matter. Soon after this, the subcutaneous induration on that side of the anus shrunk away until it appeared like a small cord of about the size of one's little finger, and the hæmorrhoidal tumefactions all around the anus disappeared, excepting one small point on the left margin. This remained, subject to some swelling and tenderness on any unusual excitement, but ordinarily free from pain or peculiar sensibility; only exhibiting the appearance of a small shot under the integuments of the part. Meanwhile however, the little opening on the right continued steadily to yield a small discharge, not exceeding, probably, half a tea-spoonful a day. The opening was so minute as barely to admit the end of a common probe. This was however, used in the examination, and an incomplete fistula found, which was about one inch in depth.

After inspection, it was operated on, so as to divide the septum between the sinus and the anus. After this operation, the incision was regularly dressed by the interposition of lint, &c. It soon healed, leaving a superficial ridge in the direction of the sinus, and a considerable tumefaction within.—After a few weeks the sinus again opened at the outward end of the incision. This opening continued to discharge as it did before the operation.

Mr. C. was as before stated, a very active man in business, often riding on horseback, and often walking much: all these habits have continued regularly to the present time. About three months ago he took lodgings at the private boarding house of a relative, where he was served every night at 9 or 10 o'clock with a cup of coffee—about three gills in quantity. Mr. C. had been habitually a tea-drinker at breakfast and supper. Thus continued the fistulous opening until three weeks, since when, having remarked that he felt no inconvenience, and that his clothes had ceased to indicate any discharge from it, he then examined, and found that the fistulous opening had healed, and the eschar in the direction of the cut, shrunk below a level with the external integuments, whilst the cord within had entirely disappeared.

The coffee used by Mr. C. was cheap West India coffee and was kept standing in a tin coffee-pot from supper until 9 o'clock at night.

Notwithstanding this is a solitary case of the kind, there is much reason to believe that it stands as a demonstration of the curative power of coffee in such a case.

And whilst it is admitted the recovery and the use of the coffee, an unusual article of diet with this individual, may have been a mere conjunction of circumstances, or a coincidence, having none of the relation of cause and effect, still, observations on the use both of tea, which this patient had habitually used, and coffee, which was accidentally adopted, tend to encourage the idea that the use of the coffee was the cause of recovery from the fistula.

Almost every mother has observed the different influences of tea and of coffee on the function of lactation; and mothers abounding in excess of this secretion have found that the liberal use of coffee has not only failed to produce, like tea, an increase, but on the other hand has with great uniformity tended to lessen the quantity. So well observed has this fact been, that nursing women wishing to dry or to lessen their lactation have learned to adopt the use of coffee as a diet; and on the contrary to live liberally on tea when they desire an increase. The fact of the influences of different articles of diet on this function, none will be disposed to controvert. If his be a fact, why may not this opinion among the people, founded on the observation of facts, relative to the use of tea and coffee, be correct also? If this opinion be founded in fact, relative to the use of coffee in general, it is by no means less probable, if not more so, that the use of the Cuba or Jamaica coffee, much stronger in the peculiar powers of that article, is calculated to produce signal effects.

It would be well for physicians to institute a course of examination on this subject, which might enable them to determine if this article, in such universal use as a beverage, whilst its moderate use is both wholesome and agreeable, is not at the same time so medicinal as to entitle it to a place amongst the articles which promote absorption. Or, if they should not find this idea confirmed by observation, they may ascertain that as an article of diet, it is mainly valuable on account of its peculiar stimulating powers, and that it, apart from the sugar and milk commonly used with it, is *not* calculated to afford nutrition. And on the other hand, they may find, what is probably the fact, that India tea, with the usual accompaniments, is exhilarating by virtue of its peculiar stimulating power, and either fails to promote absorption, or contributes more or less liberally to the end of nutrition. Observations in point may be made by investigating the habits of diet of patients labouring under hæmorrhoidal or fistulous afflictions. The same may be extended to lactating females, dropsical persons, &c.—*Southern Med. and Surg. American Jour., Feb.*, 1838.

PETITION FROM ULSTER.

To the Honourable the Knights, Citizens, and Burgesses, of the United Kingdom of Great Britain and Ireland, in Parliament assembled:—

The Petition of the undersigned, as Chairman and Secretary of a Meeting of Physicians, Surgeons and Apothecaries, practising in Ulster, convened by public advertisement, and held in the Belfast Hospital on Wednesday, the 24th of January, one thousand eight hundred and thirty-eight:

HUMBLY SHOWETH,

That the inquiry instituted by your Honourable House in the year 1834, into the state of the Medical Profession in these Kingdoms, and the acts of the various Medical Corporations before and since that period, satisfactorily prove to your petitioners the urgent necessity for medical reform.

That the various Universities, Colleges, and Halls, have (so far as Medicine is concerned) failed in a great measure to effect the objects for which they were instituted; inasmuch as their principal aim throughout,

appears to have been the advancement of the individual interests of one or other body, at the expense of rival institutions, rather than the welfare of the Profession, or the public good.

That the attempts of the Royal College of Surgeons and Apothecaries' Hall of Ireland, to obtain in the present Session of Parliament, powers which the Legislature never intended they should possess when originally incorporated, are at once indicative of disunion and jealousy, discreditable alike to either body, and demonstrate clearly a desire for monopoly by both parties.

That your petitioners have, for the reasons stated, no confidence whatever in any measures propounded by those chartered bodies for the better regulation and government of of the Medical Profession; and humbly pray your Honourable House not to sanction the interested proposals or bills emanating from either the Royal College of Surgeons, or Apothecaries' Hall in Ireland; being convinced that they are not in unison with the opinions of the great body of the profession in this Kingdom.

That your petitioners humbly and respectfully beg to submit the annexed outline of a plan for the better regulation and government of the Medical Profession, in the British dominions, to the consideration and wisdom of your Honourable House; feeling assured that such outline will be fully sustained by the evidence taken before the Committee of your Honourable House; and, if adopted, will tend materially to lessen or remove altogether the anomalies, abuses, and mischief, at present existing; while, at the same time, it will improve and elevate a Profession whose high and peculiar characteristic is, to minister to and alleviate the sufferings of mankind.

1st. That a Central Board of Examiners be formed in each of the Metropolitan Cities—in London, Dublin, and Edinburgh, who shall possess the power of conferring a Diploma in Medicine, which will entitle the possessor to practise in any or all of the branches, and in any part of the British dominions; that the persons composing these Boards be selected from the most distinguished members of the Profession in the three Kingdoms; shall receive a *stated* annual salary for their services as examiners, and be totally unconnected with any Medical School; that they be authorised to frame ONE *curriculum of education*, on an enlarged and scientific scale, for the entire Medical Profession, which all medical teachers and students shall be strictly bound to observe.

2nd. That they be entrusted with the power of recognising Medical Schools and Teachers; and of punishing, on summary jurisdiction, all persons who presume to teach or practise illegally the profession in any one of its departments. Further, that they be instructed to frame ONE *Pharmacopœia* for the whole Empire; and thus remove the inconveniences and risk at present so generally experienced by a want of uniformity in the preparation of several most important and dangerous remedies: and as many hazardous and fatal results have occurred in consequence of there being no existing law to prevent persons ignorant of the nature and properties of Drugs and Medicines, as Grocers, "*Huxters*," and such like, from trafficking in them—that in future no persons be permitted to deal in such articles, without the express sanction and license of the proposed Central Boards.

3rd. That the existing Universities, Colleges, and Halls, be deprived merely of the privilege of conferring Medical Diplomas and that they be permitted to exist as Schools; retaining all the funds, museums, and other properties they may be already possessed of; though these have been obtained without any corresponding benefits having been conferred either on the Profession or the public:—or, having a due regard to vested interests and existing charters, that the privilege be vested solely in them of selecting from their Faculties or Councils, competent persons to form the proposed Central Boards, to examine in Medicine, Surgery, and Pharmacy, and grant diplomas for general practice. The FEES resulting therefrom to be appropriated to the defraying the expenses of the Boards; and the *surplus* (if any) to be handed over to the several Universities, Colleges, and Apothecaries' Halls, in proportion to the number of persons obtaining license to practice as General Medical Practitioners in either Kingdom, and to be expended for scientific purposes. And your petitioners, as in duty bound, will ever pray.

DAVID MOORE, Surgeon, Chairman.
CHARLES HURST, Surgeon, Secretary.

[This Petition has been forwarded to Mr. Warburton for presentation to the House of Commons.—ED. L.]

ELECTION OF HOUSE-SURGEON AT UNIVERSITY COLLEGE HOSPITAL, BY CONCOURS.

WRITTEN EXAMINATION.

1. WHAT dangerous consequences are to be dreaded after transverse wounds of the neck, involving the air-passages?

2. State what may be required in the way of after-treatment, when the operation of hernia has been happily performed at no advanced period of the strangulation?

3. Describe the course and relations of the posterior tibial artery; and the best mode of treating cases of wounds and secondary hæmorrhage from it.

4. The symptoms and signs of the dislocations of the humerus into the axilla, and the circumstances by which a fracture of the neck of the scapula may be distinguished from it. Mention the treatment of the last accident.

5. The symptoms of a fracture of the neck of the thigh-bone, and the circumstances marking its difference from each variety of dislocation of the hip. Mention also the sex and period of life, in which the former accident is most frequent, and the circumstances in explanation of the statement to be given on these last points.

6. Describe the most common dislocation of the elbow, and the case most likely to be mistaken for it in young subjects, with the circumstances by which they may be discriminated from one another. Also the treatment in both cases.

OPERATIONS IN THE THEATRE.

1. Put on apparatus for fracture of the olecranon.

2. Show the treatment of fracture of the femur as adopted in this hospital.

3. Remove the foot at the articulation between the first and second row of the tarsal bones.

4. Apply a ligature on the anterior tibial artery in the upper third of the leg.

5. Apply a ligature on the femoral artery in the middle of the thigh.

There were two candidates; at the conclusion of the above examinations the Committee considered the gentlemen were so nearly balanced that it would be necessary to carry out the contest further, before a decision could be given. Accordingly the following questions, *viva voce*, were answered in the theatre.

What are the leading symptoms and treatment of scrofulous ophthalmia?

What are the symptoms and treatment of purulent ophthalmia?

What are the symptoms and treatment of idiopathic and venereal iritis?

If you were called to a case of retention of urine in an old man, who had had difficulty of making water for years, what disease would you suspect to be present, and what treatment would you pursue?

What treatment would you adopt in a case of retention of urine from stricture?

What would you have to remove in a dead body to entirely expose the vena cava?

What, for the entire exposure of the bile-duct?

What, to expose the pancreas to see its condition?

How would you expose the œsophagus from beginning to end?

Describe the anatomy of the rectum.

What are the nerves and vessels in relation to the subclavian artery?

What do you cut through to expose the external iliac artery?

At the conclusion of this examination, the Committee considered that the candidates

"In the well foughten field
Were so well match'd in their chivalry,"

that a further trial of strength was resolved on, and the following questions, ten minutes being allowed for answering each in writing, were put:—

The anatomy of the perineum.

The symptoms of stone in the bladder.

Describe the lateral operation for stone.

When Mr. THOMAS LEWIS, of Carmarthen, was declared duly elected.

QUANTITY OF WATER IN OPIUM.

IT is well known that not only the drugs which are prepared in common, but even the primary materials from which they have been obtained, are now falsified to an extraordinary and unheard of extent. Thus, for example, of five different samples of opium procured in different establishments, and exposed to heat until perfectly dried, one sample lost 35½ parts of water in 100; another, 35; the rest, 40, 50, 45½, and 50 parts, in the hundred; one sample of opium, from Constantinople, lost as much as 63 parts of water. It would be an interesting matter to follow up these experiments, and determine whether the various species of opium sold in the market, contained equally variable quantities of water, for were this the case, the different preparations of opium must vary very much in strength, according to the specimen employed in their preparation.—*Journal of Chemistry*, June, 1838.

NOTICE.

In consequence of the Coronation the publication of THE LANCET *will take place on Wednesday next. No Advertisements can be received later than* 10 *o'clock on Tuesday morning.*

TO CORRESPONDENTS.

THE communications of *Mr. Propert* and *An Old Army Surgeon* shall be inserted.

X. Y. Z. We understand that the case alluded to is on the point of being brought to trial.

W. H. Our printers declare themselves incapable of deciphering the *botanical* communication forwarded from Edinburgh.

We decline inserting the letter of *Honestas*.

We thank *Looker-on* for directing our attention to the case in the "Cheltenham Free Press."